CONSTRUCTION NEWS

Supplement to ENGINEERING NEWS. New York, March 10, 1910.

CONTENTS.

CONSTRUCTION NEWS:
Railways 89
Electric Railways 89
Light and Power Plants........ 90
Bridges 91
Buildings 91
Water Supply and Irrigation........ 93
Sewerage 94
Garbage Disposal 94
Streets and Roads........ 94
Manufacturing Plants 95
Miscellaneous Contracts 96
Contract Prices 96
Plans and Specifications on File........ 98
List of Contracts Pending........ 98
INDUSTRIAL NOTES 97
TRADE PUBLICATIONS........ 97
PROPOSALS 98

(List of Contracts Pending, and the list of Plans and Specifications on file at the office of Engineering News, will be found on the last page of this Supplement.)

RAILWAYS.

(** denotes that this work is advertised in Engineering News.*)

ALGOMA CENTRAL & HUDSON BAY.—Concerning this statement in issue of Feb. 3: "When surveys are completed, bids will be asked for building an extension of 200 miles at an estimated cost of $3,000,000. There will be 64 bridges." W. C. Franz, Gen. Mgr., Sault Ste. Marie, Ont., writes us that "statements have been made prematurely by some one unauthorized. We will without doubt make this extension, but no definite plans have been made in connection with it."

ARANSAS TERMINAL R. R.—This company has been organized, with the principal office at Aransas Pass, to build a terminal railway to connect Aransas Pass with proposed deep water harbor there. The incorporators are E. O. Burton, A. H. Danforth, A. J. Bell and A. L. Matlock, of San Antonio, Tex.; J. J. Welder, of Victoria, Tex.; J. F. Green, of Gregory, Tex.; D. M. Picton, of Rockport, Tex.; R. P. Clark, of Galveston; F. L. Alvord and T. P. Boyd, of Fort Worth, Tex.

ATCHISON, TOPEKA & SANTA FE.—The C. H. SHARP CONTRACTING CO., Sharp Bldg., Kansas City, Mo., which has a contract for double-tracking 75 miles of the Santa Fe lines in New Mexico, west of Rio Puerco, will commence construction at once.

ATLANTIC NORTHERN & SOUTHERN.—Contract has been awarded to the ENGINEERING CONSTRUCTION & SECURITIES CO., it is reported, for building an extension from Kimballton, southward, 38 miles long. H. S. Rattenborg is Pres.; C. B. Judd is Ch. Engr., Atlantic, Iowa.

BALTIMORE & OHIO.—Contract has been awarded to ROBERT GRACE & CO., of Cleveland, for grading the B. & O. yards at Chicago Junction, Ohio. Estimated cost, $1,500,000.

BEAUMONT & GREAT NORTHERN.—Company has amended its charter to provide for extending its line from Trinity, Tex., northwest to Jewett, about 60 miles, where it will connect with the International & Great Northern. It is announced that the construction of this extension will be started at once. R. C. Duff, Gen. Mgr., Houston, Tex.

BROWNWOOD SOUTHWESTERN.—This company, with principal office at Brownwood, Tex., has filed charter with the Secretary of State. Its purpose is to build a line from Brownwood southwest to a point on the Colorado River, 39 miles. Capital stock, $30,000. Incorporators are R. A. Love, of Kansas City, Mo.; H. T. Love, Brooke Smith, B. E. Hurlburt and D. F. Johnson, of Brownwood; Jos. C. Kerbey, John T. Smith, A. J. Eilers, Louis Davis and F. M. Covert, all of Austin, Tex.

BUFFALO, ROCHESTER & PITTSBURG.—Work has been started under the contract recently let by the Buffalo, Rochester & Pittsburg Ry. Co. for the double-tracing and straightening of about ten miles of road between Newton and Mount Jewett, in McKean County, Pa., according to the "Wall Street Journal." The cost of this construction will be $625,000, $125,000 of which will be charged to earnings. Permission has been granted by the Public Service Commission to issue bonds to the amount of $500,000 for the remainder. The contract calls for completion of the work by Nov. 30, 1910, and officers of the road expect to be operating over the new line by the end of the year. When this piece of double-tracing is finished, the entire main line of the Buffalo, Rochester & Pittsburg Ry. from Ashford, N. Y., to Punxsutawney, Pa., will be supplied with two tracks. At Ashford the road branches, one line going to Buffalo, where freight to and from Lake Erie points is shipped, and the other to Rochester and Charlotte on Lake Ontario. At Punxsutawney, also, the main line divides, one branch leading to the coal fields of Indiana County, Pa., and the other to Butler and Pittsburg. Completion of the second track on the entire main line will give the company an advantage in handling the traffic from these branches at either end. Two short spurs, one three miles and the other one mile long, are being constructed in the coal regions of Pennsylvania; dams are being built at different points to give supplies of pure water; a $50,000 timber preserving plant is to be erected at Bradford, Pa.; and a new steel dock is being put up to replace the old wooden dock at Charlotte, N. Y. W. T. Noonan is Gen. Mgr., Rochester, N. Y.

CHESAPEAKE & OHIO.—BOXLEY BROS. & FRAZIER, of Logan, W. Va., have a contract to build an extension of the Guyandotte Valley branch from Dingess Run to the mouth of Buffalo Creek, W. Va., eleven miles.

It is officially announced that the directors of the Chesapeake & Ohio Ry. Co. have authorized improvements and betterments to cost about $5,000,000. The work is to be done during the present calendar year, and includes double tracking, the laying of side tracks, the enlargement of internal facilities, et. It is stated that the company is well prepared financially to take care of this new work. It is also stated that no comprehensive financial plan such as has been talked about for the acquisition of other properties was authorized.

Contract has been awarded to JOHNSON & BRIGGS, of Richmond, Va., to build five miles of line for the Chesapeake & Ohio Ry. on Horse Creek, which is a branch of the Coal River Railway.

Company expects to begin double-tracking in the near future between Riverton and St. Paul, Vanceburg and Springdale, and Carntown to Brent, in Kentucky, a total of about 67 miles. H. Pierce, Richmond, Va., is Engr.-of-Construction.

Final plans for yards to cost about $1,000,000, at Silver Grove, Ky., have not yet been finally adopted. Contract has been let for a small portion of the grading to LANGHORNE & LANGHORNE, Lynchburg, Va.

KANAWHA & MICHIGAN.—This Company, according to press reports, will spend $100,000 in eliminating curves and heavy grades at Kanauga, in the southern part of Ohio, during the coming summer. F. B. Sheldon, Ch. Engr., Columbus, Ohio.

KANSAS CITY, MEXICO & ORIENT.—We are offcially advised that contract has been let to ROACH & STANSELL, of Memphis, Tenn., for building a 45-mile section between San Angelo and Eldorado, on the proposed extension to be built from San Angelo to Del Rio, Tex., via Eldorado, a total of 170 miles. There will be no important bridges and no tunnels. C. H. Webster is Ch. Engr., Sweet water, Tex. Noted on Jan. 20.

MEXICO.—The Federal Government has granted a concession to Alberto Lagoretta, of Queretaro, State of Queretaro, to build a railroad between the city of Queretaro and the town of San Jose Iturbide. The line will be about 50 miles long and will traverse a territory that is in a high state of agricultural development and is lacking transportation facilities. Funds are already available. The line will connect with the National Railways of Mexico at Queretaro.

MEXICO NORTHWESTERN.—L. J. Keena, U. S. Consul, writing from Chihuahua, states that this company "is rapidly pushing forward the grading work on its connecting line between Terrazas, the terminus of the Rio Grande, Sierra Madre & Pacific R. R., and Madera, the terminus of the Chihuahua Pacific R. R. These two companies, together with the Sierra Madre & Pacific R. R. and the El Paso Southern bridge, were absorbed in 1909 by the Mexico Northwestern Ry. Co. The extension from Madera to Terrazas will add 116 miles of track to the 307 miles which the company now has in operation, and will bring transportation advantages to the Guaynopita and Guaynopa copper-silver-gold districts. It will also open up large tracts of valuable timber land in western Chihuahua, and will connect the city of Chihuahua with El Paso, Tex., though in so roundabout a way that it is not probable freight rates between these two points will be affected. Every effort will be made to have the Madera-Terrazas road in operation by the end of the present year." B. H. Bryant is Ch. Eng., Casas Grandes, Chihuahua, Mexico.

MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE.—We are officially advised that the contract for the cut-off between New Richmond, Wis., and Withrow, Minn., and between Spencer and Owen, Wis., has been let to FOLEY, WELCH & STEWART, of St. Paul, Minn. Plans for the bridge over the St. Croix River have not yet been prepared. Thos. Green is Ch. Engr., Minneapolis. Noted on Feb. 17.

MISSOURI, KANSAS & TEXAS.—Contract has been awarded to the PATTON-GIBSON CO. for a change of line and double-tracking from Atoka, Okla., north about 20 miles to Limestone Gap, 20 miles. Estimated cost, $800,000.

NEUCES RIVER VALLEY.—Announcement is made that contracts will be let about April 1 for the building of this railway, from Beeville, Tex., west via Oakville, Tilden, Cotulla and Carrizo Springs to Eagle Pass, 175 miles. Three bridges will be built over the Neuces River. C. K. CONANT, Fort Worth, has a contract for part of the work. W. A. Frisby, Simmons, Tex., is Pres., and L. Frisby, Gen. Mgr., Austin, Tex.

NEW PARK & FAWN GROVE.—Robt. B. McKinnon, C. E., York, Pa., has prepared plans for the extension of this line to Delta, 8½ miles.

NEW YORK, NEW HAVEN & HARTFORD.—Timothy E. Byrnes, Vice-Pres. of the New Haven Lines, stated on March 7 to the Massachusetts Legislature that this company is willing and ready to build a tunnel between the North and South terminal stations in Boston. It is ready to spend $16,000,000 on the project. Electrification would be carried along with the construction work, he said, and in three years the tunnel could be built and by that time a part of the suburban service out of Boston would be electrified. He made the statement at a hearing on a bill for the construction of the tunnel. The proposition advanced by him was: If Boston would buy the land for the street the company will build the tunnel under that street and will pay the city $2,000,000 for the sub-surface right to build under it, and will build the street also. By this proposition he estimated it would cost the city about $10,000,000 to secure the land; it would cost the New Haven company $2,000,000 for the sub-surface right and $2,000,000 for the construction of the road, $5,500,000 for building the tunnel, $2,000,000 for the connection at either end and $4,500,000 for the acquirement of additional land at the two terminals. If the city does not desire to provide the route the company could not afford to build the tunnel in a direct line, but would carry it around by way of Atlantic Ave. on a curve.

NORTHERN PACIFIC.—PETER SIMS, of Spokane, Wash., will have charge of the work of building the Point Defiance extension of the Northern Pacific Railroad. Approximate cost is $2,000,000. Most expensive feature will be a tunnel 900 ft. long.

OKLAHOMA CITY & PANHANDLE.—Chartered in Oklahoma, with $250,000 capital, to build 160 miles of line from Oklahoma City to the western edge of Harmon County, on the Texas Panhandle border. Estimated cost, $2,000,000. The incorporators are A. Key, J. B. Johnson, T. R. Andrews, S. P. Bennett, Joseph Fain and E. J. Dupree, all of Oklahoma City; and H. E. Chapman, of Altus, Okla. Officers are A. Key, Pres.; Eugene S. Sullivan, of Boston, Vice-Pres.; H. E. Chapman, Secy.; E. J. Dupree, Treas. Headquarters, Oklahoma City, Okla.

OKLAHOMA CITY & SOUTHWESTERN.—This company, which was recently organized, has commenced work on its line running out of Oklahoma City. The road will run in a southwesterly direction and connect with the Memphis Roswell line at Memphis, Tex. Considerable work has already been done on the Texas division, contract for the construction of which has been let to a construction syndicate which is preparing to push the work rapidly from Memphis, west. Robert S. Lemon, of Kansas City, Mo., is the manager of the construction syndicate.

PECOS & TOYAH VALLEY.—We are officially informed that this company has secured capital and right-of-way, and has completed surveys for the 41-mile line south from Pecos, Tex. Contract for grading is held by THOS. BRIGANCE, of Fort Worth, and work is 25% finished. Balance of construction work will be done by the company by force account. It is expected that 36 miles of line will be completed by June 1 into Balmorhea. W. L. Carwile is Pres., Dallas, Tex. L. W. Anderson is Ch. Engr., Pecos, Tex. Noted on Feb. 17.

SAN PEDRO, LOS ANGELES & SALT LAKE.—W. A. Clark, Pres., announces that "engineers report construction of safe high line in Meadow Valley practicable and at moderate cost. Estimated cost of restoring line for temporary resumption of traffic, $400,000. Special committee advises putting force of engineers in field. I have instructed them to act vigorously on both propositions. Reconnoissances report via Panaca and Pahranagat not yet received, but it will not probably change our plans." E. G. Tilton, Ch. Engr., Los Angeles, Cal.

TUCUMCARI, PORTALES & GULF.—We are officially advised that negotiations have been perfected between the citizens of Pyote, and Winkler County, and the Tucumcari, Portales & Gulf R. R. Co. for the immediate construction of the first section of 25 miles of this road from Pyote to Duval, in Winkler County. Bids from contractors for this work will be received by M. J. Healy, Pres. and Gen. Mgr., at Pyote, Tex. The road is projected to extend from Tucumcari, N. Mex., traversing the counties of Quay and Roosevelt in New Mexico, and Bailey, Cochran, Yoakum, Caines, Andrews and Winkler, to Pyote, Tex., thence south to Del Rio, Tex. Agricultural land that is now used exclusively for cattle purposes will be opened by the construction of this line.

VIRGINIA & CAROLINA SOUTHERN.—Contract has been awarded to WADE & CLOWER, St. Pauls, N. C., for an extension from St. Pauls southeast to Elizabethtown, 30 miles. Grading is now under way.

WICHITA FALLS & WELLINGTON.—The charter of the Wichita Falls & Wellington R. R. Co., with principal office at Wichita Falls, Tex., has been filed with the Secretary of State. The proposed road is to be an extension of the Wichita Falls & Northwestern Ry., and is to run from Frederick, Okla., to Wellington, Tex., 100 miles. The Wichita Falls & Northwestern Ry. is owned by J. A. Kemp, of Wichita Falls and associated. The incorporators of the Wichita Falls & Wellington R. R. Co. are J. A. Kemp, Frank Kell, Wiley Blair, P. P. Langford, Thomas R. Orth, M. M. Murray, W. L. Robertson, C. C. Huff, R. A. Thompson and R. E. Huff, all of Wichita Falls, Tex.

ELECTRIC RAILWAYS.

NEW YORK, N. Y.—The Board of Estimate and Apportionment on March 4 voted to grant a franchise to the Manhattan Bridge Three-Cent Fare Line to operate cars across the new Manhattan bridge from the terminal of the Long Island Railroad at Flatbush and Atlantic Avenues, Brooklyn, to the foot of Canal St., on the North River, in Manhattan Borough, and directed its chief engineer to draw up a sample form of agreement. Representatives of the Brooklyn Rapid Transit Co. and the Coney Island & Brooklyn Railway Co. appeared in opposition to the granting of the franchise. John C. Brackenridge, 95 Liberty St., Vice-Pres. of the Manhattan Three-Cent Line, and formerly general manager of the Brooklyn Rapid Transit Co., gave details of the financial estimates of the new company, at a hearing before the Public Service Commission. Mr. Brackenridge estimated that the cost of power houses, car barns, trackage, cars, etc., would be about $650,000. To this he added $200,000 for preliminary expenses, such as counsel fees, engineers' salaries and promotion costs. The company estimates that it would carry 30,000 passengers a day, paying $900 in fares. It figures on a net income of $92,125 a year, which would be enough to pay interest on the bonds and produce a profit. The idea of using gasolene for motive power has been abandoned and the company is now planning to use electricity, having its 40 cars so equipped that the overhead trolley may be used in Brooklyn and the underground system in Manhattan. The change can be made from one system to another without stopping the car, it is stated. Noted on Jan. 13.

PHOENIXVILLE, PA.—The Phoenixville, Valley Forge & Stafford St. Ry. Co., has secured right-of-way to build its railway between Phoenixville and Valley Forge, noted on Feb. 3. Thomas E. O'Connell, West Chester, Pa., is Pres.

STROUDSBURG, PA.—The Stroudsburg & Water Gap St. Ry. Co., it is stated, has been granted a perpetual franchise by Council to build a 2-mile extension of its electric railway along the highway extending through the Delaware Water Gap. Engineers are now at work on the proposed extension. The franchise stipulates that work must be completed by July 1, 1911. A. A. Holbrook, Wilkes-Barre, is Secy. and Gen. Mgr.

NEW CASTLE, PA.—Directors of the New Castle & New Wilmington Electric Ry. Co., are preparing to place the stock of the concern upon the market. They have accepted the report of A. G. Shaw, Ch. Engr., who has marked out the right-of-way and found a suitable grade. The plans also provide for an extension of the line to Sharon by way of West Middlesex. People living along the line will be asked to subscribe for stock, to aid the project, and bonds will also be issued to aid in financing the project, the company will be capitalized at $1,000,000, noted on Feb. 10.

BALTIMORE, MD.—Application will be made for a charter to incorporate the North Maryland Railway Co. The incorporators named in the bill are: Thomas H. Robinson, Michael H. Fahey, Omar D. Crothers, Richard Dallam, Samuel C. Rowland, Murray Vandiver and Clarence C. Pusey. The capital stock is not named. The proposed line is to extend from some point on the eastern or northern boundary of Baltimore to the Pennsylvania or Delaware lines. No definite route is specified. The line is only confined to Baltimore, Hartford and Cecil Counties. The company has the power to acquire any railway or to consolidate with any other line. It is also given power to manufacture and sell electricity. Towns and cities through which the line will pass are given the power to subscribe to its capital stock when so requested by a majority of the voters.

GREENVILLE, S. C.—The Greenville, Spartanburg & Anderson Railway Co., which proposes to build an electric railway connecting the three points named in its title, has organized. T. B. Lee will immediately begin survey from Anderson to Williamston and Greenville. The directors are W. J. Thackston, Pres. and Treas., Greenville, S. C.; J. R. Vandiver, Vice-Pres.; T. F. Hill, of Anderson, is Secy. Noted on Feb. 10 and Jan. 20.

GRIFFIN, GA.—The Middle Georgia Interurban Railway Co. has applied for authority to issue $1,050,000 of bonds and $200,000 of stock. L. W. Roberts of Atlanta, Ga., is Pres., and Brown & Brown of McDonough, Ga., are counsel. This proposed electric railway will run from Griffin, Ga., via Jackson, Indian Spring and Monticello, to Social Circle. Grading is under way.

AKRON, OHIO.—Charles Currie, Gen. Mgr. of the Northern Ohio Traction & Light Co., has announced that this company has employed agents to complete the purchase of a private right-of-way between Cleveland and Akron which will give the Akron, Bedford & Cleveland line a shorter route to Cleveland.

CINCINNATI, OHIO.—At a meeting of Board of Directors held on March 4, it was decided to have location survey for the Georgetown and Washington C. H. Traction line. It will be 90 miles in length, passing through Brown, Adams, Highland and Fayette Counties and connecting Georgetown, West Union, Hillsboro, Greenfield and Washington C. H. James K. Ryan, is Pres., J. H. Wolff, Vice-Pres. and Gen. Mgr., Chas. J. Hosbrook, is Ch. Engr., Cincinnati.

BRECKENRIDGE, MINN.—We are officially informed that contracts for materials, etc., have been awarded and will be delivered May 1, when company will commence construction of the Wahpeton & Breckenridge St. Ry. This company will build an electric railway on business streets of Breckenridge and Wahpeton, N. Dak. Surveys are made and capital and right-of-way have been secured. F. L. Sturm is Mgr., Wahpeton. W. A. Baker, is Ch. Engr., Wahpeton. Noted on Feb. 10 (1910), and Dec. 2, '09.

LITTLE ROCK, ARK.—The Eureka Springs Electric Co. has been incorporated in Arkansas to build an electric railway in Little Rock. Capital stock, $100,000. Incorporators: Henry C. Brent, A. M. Barrow and Justin D. Bowerstock.

DALLAS, TEX.—The Dallas Traction Co., it is announced, will begin construction within two months on its proposed street railway from Mount Auburn addition to a point where connection will be made with the consolidated lines of the city. Power to operate the line will be leased. The company has not yet been incorporated. Capital stock, $25,000. E. L. Lancaster, 334-336 Commerce St., Dallas, is Gen. Mgr.

MUSKOGEE, OKLA.—The Eastern Oklahoma Traction Co., of Muskogee, with $100,000 capital stock, has been chartered in Oklahoma to build 251 miles of electric interurban lines at an estimated cost of $26,000 per mile, running from Muskogee to Webbers Falls, Muskogee to Checotah, Muskogee to Tulsa, thence to Sapulpa; Muskogee to Okmulgee, thence through Okfuskee and Lincoln counties to Oklahoma City, and Muskogee to Wagoner, thence ten miles up the Grand River Valley. The incorporators are H. B. Spaulding, L. W. Kershaw, R. N. Eggleston, J. W. Mattox, W. L. Tull, J. B. Furry and Guy Bowman, all of Muskogee. The same incorporators also have chartered the Railroad Construction Co., of Muskogee, with $50,000 capital stock.

ALBUQUERQUE, N. MEX.—City has accepted the proposition made by J. H. Barrett, Pittsburg, Pa., to build a 2-mile electric street railway on the east side of Albuquerque. The Citizens' Traction & Power Co. has been organized to build and operate this railway. A charter will be applied for, to build a comprehensive system covering the entire city and a power plant will be installed. For the present power will be purchased. A. W. Hayden, Pres.; D. H. Boatright, Vice-Pres.; J. C. Baldridge, Treas., and Isaac Barth, Secy.

PORTLAND, ORE.—It is announced that prospects for the extension of the Oregon Electric Ry. Co.'s lines, from Salem to Albany and from Tigard to McMinnville, this year, with the expenditure of $2,225,000, and the building of 57 more miles of electric railway in the Willamette Valley, are favorable. The length of the proposed line between Salem and Albany is about 27 miles. Six routes have been surveyed by the Oregon Electric Ry. engineers and the selection of a survey is one of the details to be decided by the company. There is also more than one route to select from on that portion of the McMinnville line between Newberg and McMinnville. The line may be built through Dundee and Lafayette or it may be constructed to the north of these points. The length of the extension from Tigard to McMinnville will be 30 miles. Definite announcement is made, however, that the proposed extension from Forest Grove to North Yamhill, 12 miles, will not be built this year. Guy W. Talbot is Gen. Mgr., Corbett Bldg., Portland.

ELECTRIC RAILWAY.—An American consul in a European city reports that the plan of a local municipality for an electric line has advanced to the point where bids for its construction will be advertised within the next few weeks. Officials in charge assure him that there is no objection to American concerns making offers for the construction of the entire system or for all or part of the equipment. Should any firm desire to bid a letter in German should be addressed to an official named in the report, specifying exactly what work or equipment it is prepared to furnish. This should be done as soon as possible, in order that the letters may be submitted to the City Council when the entire programme is finally settled. The system as planned will cost about $1,000,000. Copy of the report giving full details, together with a map of the city indicating the proposed electric street car system, can be obtained by interested firms upon application to the Bureau of Manufacturers (referring to File No. 4610), Dept. of Commerce and Labor, Washington, D. C.

LIGHT AND POWER PLANTS.

(denotes that this work is advertised in Engineering News.)*

ROWLEY, MASS.—On February 12 the citizens voted to install an electric light system. The electric light committee was instructed to make contracts for the erection of poles, etc., for lighting the streets of the town, and also to secure the cost of maintaining.

BROCKTON, MASS.—The Brockton Rand Co. is making preparations for the erection of a power plant to furnish electricity for lamps and motors for its factory. A 300-HP. engine will be installed.

FALL RIVER, MASS.—The Fall River Electric Light Co. has applied to the State Board of Gas and Electric Light Commissions for permission to issue $200,000 in additional capital stock at $140 per share, the proceeds to be used for additions and improvements to its plant. Leslie R. Hicks is Electrical Engr.

FALMOUTH, MASS.—The town has appropriated $5,000 for an electric street lighting system, to be installed as soon as possible, and $2,000 to take care of the oil lamps until the electric lamps are ready. Service will be furnished by the Buzzard's Bay Electric Co., which proposes to install an electric plant here and furnish electricity for street and commercial lighting. Henry H. Taylor, of Falmouth, is Supt. Buzzard's Bay Electric Co.

WINDSOR, CONN.—The Selectmen have been authorized to award contract to the HARTFORD ELECTRIC LIGHT CO. for street lighting. The company agrees to furnish 167 tungsten lamps of 60 c.p., to be ready for use by July 1, 1910.

EAGLEVILLE, CONN.—Work will soon commence on the construction of the substation for the Willimantic-Rockville Light Co., at Eagleville. Electricity for operating the system will be secured from the plant of the Uncas Power Co., at Scotland, Conn.

LEESVILLE, CONN.—The East Hampton Electric Light Co., Samuel E. Elmore, of Hartford, Pres., has decided to rebuild the dam and start the plant at Leesville, Conn. A 60-HP. gasoline engine will be installed to drive the dynamo until the water power is available and will be used as an auxiliary to the water power. A new water wheel will also be installed. Estimated cost, about $6,000. E. W. Crocker, of East Hampton, Conn., is Supt.

NEW YORK, N. Y.—Bids are asked by Henry S. Thompson, Comr. Water Supply, Gas and Electricity, until 2 p. m., March 16, for furnishing gas for and to the public lamps on the streets; supplying gas, etc., for new lamps, when required; for making certain repairs to lamp-posts and for furnishing gas to public buildings from March 16, 1910, to Dec. 31, 1910, both inclusive;

For furnishing gas lamps, etc., on the streets and so on, and for connecting, lighting, extinguishing, cleaning, repairing and maintaining the same, and also lamps belonging to the city, supplying new lamps when required, and for furnishing burners and appliances for improved system of lighting on the streets, avenues, parks and public places, from March 16, 1910, to Dec. 31, 1910, both inclusive;

For furnishing naphtha or similar illuminating material for the public lamps using same, and for furnishing, lighting, extingishing, cleaning, repairing and maintaining such lamps; supplying naphtha, etc., for new lamps; for furnishing new lamps, as required; for furnishing or making certain repairs to lamp-posts, and for furnishing burners and appliances of impoved system of lighting streets, avenues, parks and public places, from March 16, 1910, to Dec. 31, 1910, both inclusive;

For furnishing and maintaining electric lamps for lighting streets, avenues, public buildings, parks and public places, from March 16, 1910, to Dec. 31, 1910, both inclusive;

For furnishing, installing, maintaining and reserving for the use of the high pressure fire service all apparatus and equipment necessary for generating and transmitting 1,830 KW. of 3-phase, 6,600-volt, 25-cycle electric power, and furnishing and delivering this power under the terms of this contract, from March 16, 1910, to Dec. 31, 1910, both inclusive, at each of the high pressure fire service pumping stations located in the Borough of Brooklyn, at Furman and Joralemon Sts. and at Willoughby and St. Edwards Sts., respectively;

For furnishing, putting in place and maintaining 632 gas regulators, from March 16, 1910 to Dec. 31;

For furnishing, putting in place and maintaining 168 gas regulators, from March 16, 1910, to Dec. 31, 1910, both inclusive;

For furnishing steam for heating or power purposes to certain public buildings, from March 16, 1910, to Dec. 31, 1910, both inclusive.

NEW YORK, N. Y.—Bids are asked until 4 p. m., March 21, by C. B. J. Snyder, Supt. School Bldgs., for furnishing and delivering materials for the use of Mechanics (Electrical Division, Building Bureau), in the Public Schools of the City of New York, in the Boroughs of Manhattan, Brooklyn, the Bronx, Queens and Richmond.

MALDEN, N. Y.—Plans are being prepared for a new plant for the New York Roofing Tile Co., including a steam plant with a rating of from 250 to 300 HP., equipment to consist of Corliss engine, heater, small electric generator, pumps, blower apparatus and clay-working machinery.

MASSENA, N. Y.—Plans have been completed by the St. Lawrence River Power Co. for the construction of a large dam 450 ft. long and about 50 ft. high to act as a safeguard to the old dam.

WATERTOWN, N. Y.—The Taggart Bros. Co., of Watertown, N. Y., is planning to equip its mill for electrical operation. The ALLIS-CHALMERS CO., of Milwaukee, Wis., has received contract for generating equipment, including a 16 × 30, non-condensing Reliance Corliss engine, operating under a steam pressure of about 150 lbs. at 150 r.p.m., direct connected to a 175-KW., 240-volt, direct-connected generator; and for one 40-HP., two 25-HP., three 30-HP., two 10-HP. "K" motors and a 10-KW. balancer set, all of the motors to be shunt wound, the 40-HP. and 25-HP. being of the variable-speed type.

JAMESTOWN, N. Y.—A. N. Broadhead, Pres. of the newly organized Jamestown Light & Power Co., has purchased the Barker property in West Second St., on which to erect a central reducing and distributing station for furnishing commercial lighting to the residents of Jamestown from the power-house of the Jamestown Electric St. Ry. Co.

NEW BRUNSWICK, N. J.—Plans have been submitted by C. C. Vermeule, Engr., for the construction of a municipal electric light plant here, utilizing the water power of the Raritan River to operate a combined water and light plant. Estimated cost, from $40,000 to $50,000.

NEWARK, N. J.—Schloss, Held & Schloss, of Newark, are making arrangements for the construction of a new power plant in connection with their new fertilizer factory, the equipment to include an engine-driven generator, boilers, pumps, heater, electric motors, controlling apparatus, etc. About 500-HP. will be needed at the beginning.

PHILADELPHIA, PA.—The citizens have $60,000 to be used for lighting Independence Hall. The Park Commissioners are considering the installation of a new electric lighting system for Fairmount Park, which includes placing all wires underground and the erection of ornamental lamp posts.

STROUDSBURG, PA.—The Stroudsburg & Water Gap Ry. Co., Stroudsburg, expects to build a new power station of 500 KW. capacity here, and will operate its own plant in the future instead of purchasing power from the Monroe County Water Power Co. A. A. Holbrook, of Wilkes-Barre, is Gen. Mgr.

WASHINGTON, D. C.—Contract for extending the electric lighting system at the Walter Reed Army General Hospital has been awarded to the NATIONAL ELECTRICAL SUPPLY CO., 1330 New York Ave., Washington, at $3,022. Capt. H. L. Pettus is Constructing Q. M., U. S. A.

Contract for installing a power plant in the Government Hospital for Insane, Washington, has been awarded to the GENERAL ELECTRIC CO., Baltimore, Md., at $15,666.

WILLIAMSBURG, VA.—Bids will be received by John L. Mercer, Chn. Water Com., until March 23 for a franchise for electric light and power, water and sewerage systems in the city of Williamsburg.

BERWIND, W. VA.—The ALLIS-CHALMERS CO., of Milwaukee, Wis., has been awarded contract by the New River & Pocahontas Consolidated Coal Co., of Berwind, for the following equipment: One 1,000-KW., 1,500 r.p.m., 6,600-volt, 3-phase, 25-cycle steam turbo-generator, with a type "C" Allis-Chalmers condenser for use with same. A pressure of 150 lbs. will be carried and a vacuum of 27 ins. maintained.

BECKLEY, W. VA.—J. F. Davis has applied for a franchise to construct and operate an electric-light system and railway here. It is proposed to develop the water power of Piney River at Worley to generate electricity, which will be transmitted here.

ALBEMARLE, N. C.—The town has awarded contract to the SOUTHERN POWER CO., of Charlotte, N. C., for energy to operate the municipal electric light system. The town will install and own the distributing system and will furnish electricity to private consumers as well as for street lamps. Contracts have already been awarded for installing the system and wiring the town.

GREENSBORO, N. C.—The Greensboro Supply Co., of Greensboro, is in the market, it is reported, for a 50-KW. alternator, direct connected, a 250 to 300-KW. direct-connected unit, Filer & Stowell non-condensing engine preferred, the outfit to be 60 cycle, 3-phase, 2,300 volts, complete with exciters and rheostats, complete specifications to be furnished, stating how long in use and actual condition.

RALEIGH, N. C.—Plans have been prepared by F. M. Simpson, Arch., of Raleigh, for the new electrical and engineering building to be erected at the North Carolina Agricultural and Mechanical College, in West Raleigh. Estimated cost, $50,000. The building will be 170 ft. in length by 90 ft. in depth, three stories high and will be equipped with the most modern apparatus. W. H. Ragan is Chn. Bldg. Com.

ROCK HILL, S. C.—The citizens have voted in favor of issuing bonds for $285,000, the sum of $35,000 to be used for the construction of an electric light plant and the remainder for water-works and sewerage systems.

WARWICK, GA.—Preliminary surveys are being made by H. S. Marshall, Engr., representing D. G. Zeigler & Co., of Jacksonville, Ga., in connection with the proposed power plant to be erected on the Flint River by D. G. Ziegler & Co.

ATHENS, GA.—The James White Power Co. has awarded contract for the entire hydro-electric equipment for its proposed water-power development to the ALLIS-CHALMERS CO., of Milwaukee, Wis., which includes four 1,200 B.HP. twin open-flume turbines operating under a head of 50 ft., each direct connected to a 700-KW., 12,000-volt, 3-phase, 60-cycle, 360-r.p.m. alternator; one 180 B.HP., single open-flume turbine operating under the same head and direct connected to a 100-KW., 120-volt., 650-r.p.m. exciter. Each unit will be equipped with an Allis-Chalmers oil-pressure, hydraulic turbine governor which will make possible true parallel operation. Beside the turbine-driven exciter there will be one 100-KW. and generator exciter set; three 150-KW. and six 500-KW., oil-filled, self-cooled, 12,000-2,200-volt, step-down transformers. Controlling and recording apparatus will be mounted on an 11-panel switchboard made of blue Vermont marble, manufactured by the Allis-Chalmers Co.

SHEFFIELD, ALA.—The Sheffield Co. has awarded contract for a 300-KW. rotary converter and a 40-KW. exciter to the WESTINGHOUSE ELECTRIC & MFG. CO., of Pittsburg, Pa. W. R. Hall, Sheffield, is Gen. Mgr.

AKRON, OHIO.—The only bidder for lighting the streets of the city with gas and gasoline was the Cleveland Vapor Light Co., for gas on six months' basis, at $16.85 per light; gas for one and one years, the same; for three years, $16.50; for four years, $16.25; for five years, $16. Gasoline for all-night schedule for every night in year, $27.

CLEVELAND, OHIO.—Bids will be received by the city until March 23 for the lighting equipment of the South Brooklyn municipal electric-light plant.

COSHOCTON, OHIO.—The Coshocton Light & Heating Co. is making preparations for the construction of a hydro-electric power plant on the Walhounding River to develop 1,000 HP., which with its steam plant will give the company an output of 2,500 HP.

CHILLICOTHE, OHIO.—Plans are being prepared by I. J. Miller, Engr., Cincinnati, Ohio, for the construction of a hydro-electric plant to supply electricity to Chillicothe and Greenfield, Ohio. It is proposed to construct five dams and five reservoirs, with an auxiliary dam and reservoir on Paint Creek between the two towns. Five power houses will also be built. Sufficient energy, it is expected, can be devoleped to supply the two towns and also Columbus. J. M. Waddell, of Greenfield, Ohio, is interested.

ELWOOD, IND.—The City Council has awarded contract to the ELWOOD LIGHT & POWER CO. to furnish electricity for lighting the streets of the city for ten years. The present arc lamps are to be replaced with enclosed arc lamps, style to be selected by the city, of which there are now 103 in use.

SOUTH BEND, IND.—The Indiana & Michigan Electric Co. will rebuild its steam plant power house here. L. B. Andr[illegible] is Supt.

ELKHART, IND.—The Lake Shore & Michigan Southern Ry. Co. has decided to build repair shops at Elkhart, to cost $3,000,000. The power house and foundation and grading will be done this year. O. M. Foster is Master Mechanic.

INDIANAPOLIS, IND.—Bids are asked until March 16 by Rubush & Hunter, Archs., Indianapolis, for lighting fixtures at City Hall.

ALBION, MICH.—The Cale Mfg. Co. is making preparations for the construction of a new power plant with an output of about 500 HP. The company is reported to be in the market for an engine, electric generators and boilers.

KALAMAZOO, MICH.—Plans are being considered by the Michigan Buggy Co. for an electric power heating plant, equipment to include a 500-HP. boiler, electric generator and engine.

HERRIN, ILL.—The Interurban Electric Co., of Cartersville, Ill., is preparing to increase the output of its plant here, for which orders for equipment have been placed with the ALLIS-CHALMERS CO., of Milwaukee, Wis., including one 500-KW., 3,600 r.p.m., 2,300-volt, 3-phase, 60-cycle steam turbo-generator receiving steam at 175 lbs. pressure and exhausting into a vacuum of 27 inches; one 150-KW., 120-volt, exciter; three 7½-KW., 2,100-210-volt transformers and one 2-panel, Vermont marble switchboard.

EAU CLAIRE, WIS.—Plans have been prepared by the Eau Claire Trunk Co., for the construction of a new 3-sty factory, together with a power plant, the equipment to include electric generators, boilers, Corliss engines, motors, etc.

APPLETON, WIS.—The Wisconsin Traction, Light, Heat & Power Co., has awarded contract to ALLIS-CHALMERS CO., of Milwaukee, Wis., for two 1,250 KW., 3,600 r. p. m., 3-phase, 2,300-volt, 60-cycle, low pressure steam turbines, receiving steam at 17 lbs. absolute and exhausting into a 28-in. vacuum.

OSHKOSH, WIS.—Plans have been prepared by the Paine Lumber Co., for a large electric power plant, to be driven by steam turbine. This company, it is reported, will soon purchase about 200 electric motors, together with other equipment, for the installation of a complete system of electrical operation in its various woodworking plants.

BLACK RIVER FALLS, WIS.—The City Council is considering plans for the construction of an entire new power plant or enlarging the present one to furnish electricity for manufacturing purposes here.

MASON CITY, IOWA.—The Mason City & Clear Lake Ry. Co. has awarded contracts for equipment as follows: One 1,500-KW., 2,300-volt, 3-phase, 60-cycle turbo-generator set, and one 500 KW. rotary converter to the GENERAL ELECTRIC CO.; two 500 HP. Stirling boilers to BABCOCK & WILCOX CO., and condensing apparatus to HENRY R. WORTHINGTON. The rotary converter will be installed at the plant at Emery. The company is also planning to construct a 5-mile, 3-phase, 13,200-volt transmission line from Mason City to Emery.

MANKATO, MINN.—The Consumers' Power Co., Mankato, through their engineers, H. M. Byllesby & Co., of Chicago, have placed a contract with the AMBURSEN HYDRAULIC CONSTRUCTION CO., 176 Federal st., Boston, Mass., for a dam on the Blue Earth River, 60 ft. high above water line and about 70 ft. above foundations. The length over all is 550 ft., including the contained power house.

PINE RIVER, MINN.—Application has been made to the Council by H. A. and T. L. Arvig for a franchise to install an electric-light plant here.

HIBBING, MINN.—Arrangements are being made by the Northern Traction Co., for the construction of a new power plant here.

ERIE, KAN.—Contracts aggregating $42,000 were awarded on Feb. 17, for construction of the municipal light and water plant. FRED M. CLARK, of Savannah, Mo., was awarded the contract for general construction. J. C. Denious is City Clk.

MARION, KAN.—The DE LA VEIGNE MACHINERY CO., R. A. Long Bldg. Kansas City, Mo., has secured contract for machinery for the municipal electric-light plant.

FAIRVIEW, KAN.—The citizens have voted to issue $25,000 of bonds for the construction of a municipal electric-light plant.

PLAINVIEW, NEB.—The town has voted to issue $8,900 of bonds for the construction of an electric-light plant.

GRAND FORKS, N. DAK.—The citizens have voted to issue $25,000 of bonds, for improvements to the municipal electric-light plant.

KAHOKA, MO.—The city will be in the market this year for a number of electric and water meters. A. H. Fraz[illegible] is Supt.

MAIDEN, MO.—See item under Water Supply-Irrigation.

OREGON, MO.—Plans are being considered for extension and improvements to the municipal electric-light plant which include the installation of both alternating-current and direct-current equipment and storage batteries. It is also proposed to establish a day service for lamps and motors during the summer of 1910. Morton R. Martin is Supt.

HOUSTON, TEX.—The South End Land Co., is considering plans for the construction of an electric-light plant in connection with the development of Westmoreland Farms and the townsite of Bellaire. W. W. Baldwin, of Burlington, Iowa, is Pres.

The Houston Electric Co. is planning to make extensions and improvements to its local system. Estimated cost, about $700,000. David Daly is Mgr.

SEGUIN, TEX.—The Seguin Water Power Co., is being organized with a capital of $100,000 to develop the power of the falls in the Guadalupe River about two miles above this city.

WETUMKA, OKLA.—The citizens have voted in favor of issuing $36,000 of bonds for the construction of a municipal electric-light plant.

MELROSE, N. MEX.—Plans are being considered for the construction of a large electrical pumping plant near Melrose, on the Belen cut-off of the Atchison, Topeka & Santa Fe R. R. The equipment will include 3,750 HP. engines, with necessary boilers, and 3 500 KW. generators, for which it is said, bids will soon be asked. About 20,000 acres will be irrigated.

CONCRETE, WASH.—The Guggenheim interests it is said are making preparations to commence work soon on their power plant here. The project includes the construction of a concrete dam 160 ft. high, across a deep gorge on Baker River, about one mile above the Washington Cement Company's plant; a reinforced concrete flume, 4,500 ft. long, with a fall of 150 ft., to the power house, where the water will be utilized to operate large turbines. It is expected that 25,000 HP. can be developed. Simon Guggenheim, of Denver, Colo. is interested.

BELLINGHAM, WASH.—Plans have been completed by the Whatcom County R. R. & Light Co., for the construction of a power house on York St., work on which will begin soon. Estimated cost, $174,000.

SAN DIEGO, CAL.—The San Diego Electric Co., has awarded contract to the ALLIS-CHALMERS CO., of Milwaukee, Wis., for a 28 and 60 × 48 vertical, cross-compound, condensing engine, which will receive steam at 160 lbs. pressure and exhausting into a 28-in. vacuum.

OROVILLE, CAL.—The Oro Light & Water Co., will soon commence work on the construction of a large dam at Hamburg, 35 miles from Stirling City. Estimated cost, about $250,000. It is expected to have the dam completed in two years. Electricity generated at the dam will be used for dredging and other purposes.

GRIDLEY, CAL.—The City Council has voted to purchase the local electric-light plant, owned by the Beebe estate, to be operated by the municipality, it is reported at $17,500.

STOCKTON, CAL.—The City Council has decided to make an appropriation for the installation of electroliers throughout the business section of the city to replace the present overhead lighting system. Estimated cost, $35,000.

DOWNEY, CAL.—The Downey Light & Power Co., is extending its transmission lines to Rivera, a distance of 3½ miles, where the company will furnish electricity for street lighting and for lamps and motors. A number of ranchers will utilize electrical service for pumping water and operating machinery. Lieut-Col. J. Robertson Gordon is Gen. Mgr.

NEEDLES, CAL.—The Needles Light & Power Co., will erect a reinforced concrete power house to double the size of their present plant. An engine and generator and additional machinery will be installed.

COLTON, CAL.—The Contract for erecting a central gas plant here for the San Bernardino Valley Gas Co., has been awarded to the STACY MFG CO., of Cincinnati, Ohio, at $132,500, to have capacity of 2,000,000 cu. ft. per day. Steel holders to be constructed in different towns and supplied from central station here, under high pressure.

HAZEN, IDAHO.—The Secretary of the Interior has executed a contract on behalf of the Government with the WONDER ELECTRIC & POWER CO., of Philadelphia, whereby the company leases for a term of ten years, beginning May 11, 1911, the right to develop and utilize the water power located on the main canal of the Truckee-Carson project, Nev., at or near a point where the waters delivered by the canal are discharged into Carson River. The maximum rate of discharge at the point for the purpose of this lease is not to exceed 500 acre-ft. per day except under exceptional circumstances. The contract provides that the Government is to receive 16½ cts. per acre-ft. for water delivered and utilized.

IDAHO FALLS, IDAHO.—We are officially advised that Louis C. Kelsey, C. E., Salt Lake City, Utah, has been employed to design and superintend the construction of a hydro-electric plant and water-works system for the city. Estimated cost, $100,000.

MONTREAL, QUE.—The Montreal Light, Heat & Power Co., has decided to install an underground conduit in the east end of the city, which will call for laying of 60,000 ft. of cable and taking down 62½ tons of copper wire. The company will expend about $200,000 a year on this work.

WINNIPEG, MAN.—Professor Herdt & Smith & Chase, Engrs., have submitted plans to the Board of Control, in reference to the distribution of power by means of conduits. The plans which were submitted call for the expenditure of $500,000, not including the installation of the wiring of cables which would bring up the total to over $1,000,000.

The following bids have been received for the supply of light, heat and power systems, for the terminal stations: Chapman & Walker, Toronto, $8,225; Canadian General Electric Co., Winnipeg, $11,200; Shipman Electric Co., Winnipeg, $11,715; Reese Engineering Co., $15,064. The bid of Chapman & Walker Co., was recommended for acceptance. One bid was received for the supply and erection of oil and water system for the terminal station, that of the Canadian Fairbanks Co., Winnipeg, at $6,482, which was recommended for award.

WINNIPEG, MAN.—The following are the bids received for power testing transformers and switching apparatus; Canadian General Electric Co., $138,250; Canadian Westinghouse Co., $116,500; Siemens' Bros., England, $111,725; Terranti, Limited, England, $89,056; Kolbin & Co., Austria, $72,100, not including testing transformers; Brown & Boveri, Switzerland, submitted bid for power transformers only at $39,700. All bids were rejected. Smith, Kerry & Chase are Engrs.

WINNIPEG, MAN.—We are officially advised that contracts have been awarded as follows for turbine governors and gate valves for generating station, Point du Bois hydroelectric development: Seven turbine generators to TENSORTEN-BORING CO., London, Eng., at $23,000; for two 5-ft. valves to GLENFIELD & KENNEDY, Kilmarnoch, Scotland, at $2,852. Bids opened Feb. 15 by Board of Control. M. Peterson, Secy.

CAMROSE, ALTA.—The town will receive bids until April 15 from companies or individuals for the installation of an electric light and power plant. on a ten-year franchise basis. O. B. Olson is Secy. and Treas., Camrose.

BRIDGES.

WESTBROOK, CONN.—Contract for the construction of a bridge across the Menunketesuck River has been awarded by the Board of Selectmen to the UNION BRIDGE CONSTRUCTION CO., 80 Wall St., New York, at $4,685.

NIAGARA FALLS, N. Y.—Bids will be received until March 15 by the Board Public Works for construction of old Fourth St. bridge over Gill Creek at East Falls St. Thomas H. Hagen is City Clk.

BUFFALO, N. Y.—The Grade Crossing Commission has awarded contract for paving, masonry, etc., for the construction of viaduct and approaches in Bailey Ave. to the HENRY P. BURGARD CO., 275 Lathrop St., Buffalo, at $78,217. Bids were opened on Feb. 26. E. B. Guthrie is Ch. Engr.

NEW YORK, N. Y.—The Ways and Means Committee of the Legisiture Assembly has reported a bill directing the Interstate Bridge Commission to make borings and obtain information regarding the proposed bridge between Manhattan and the New Jersey shore. The New Jersey section of the commission, although supported by Governor Fort, has not yet received any appropriation for such work from the State, but three counties have appropriated $5,000 each.

BELLEVUE, N. J.—The Joint Bridge Committee of Essex, Hudson and Bergen Counties has decided to construct a bridge over the Passaic River here. Estimated cost, $150,000.

*KEMPTON, PA.—Bids are asked by the County Controller, Reading, until 10 a. m., March 29, for the erection of a reinforced concrete arch bridge here.

PITTSBURG, PA.—Plans have been completed for a 2-span bridge to be constructed over the Allegheny River at Water St. and South Ave. The structure is to be about ½ mile long, with channel spans each 531 ft. long, and each approach about 900 ft. long. Estimated cost, $1,000,000.

WILLIAMSPORT, PA.—Bids are asked until noon, March 15, by the County Commissioners, Williamsport, for furnishing f. o. b. at Cedar Run, Pa., N. Y. C. R. R., approximately twelve tons 7-in. 15-lb. steel floor beams. Also 22 tons 7-in. 15-lb. floor beams delivered at Cogan Station, Pa., Pennsylvania R. R., as per blue print on file in the County Commissioners' office. To be delivered on or before April 15, 1910.

READING, PA.—Bids are asked by A. L. Rhoads, County Controller, until 10 a. m., March 24, for repairs to wing wall of Bushoug's bridge.

ELLICOTT CITY, MD.—Bids are asked until noon, March 16, by the Commissioners of Howard and Montgomery Counties, for the construction of a bridge over the Patuxent River at Harland's Mill, between Howard and Montgomery Counties. Superstructure is to be of steel, 75-ft. span, 16-ft. roadway; also for building two abutments per yard for the same to be concrete, and for fill in each side of abutments. Plans and specifications can be seen at the office of the County Commissioners of Howard County, Ellicott City. Joseph T. White is Pres. Montgomery County Commissioners.

ROANOKE, VA.—Norfolk & Western R. R. Co., C. S. Churchill, Ch. Engr., Norfolk, will erect two bridges.

NEWPORT NEWS, VA.—The Chesapeake & Ohio Ry. Co., F. I. Cabell, Engr. M. of W., Richmond, Va., will construct a car float bridge between Newport News and Norfolk, Va., approach, ½ mile long, concrete foundation.

LAURINBURG, N. C.—Contract for constructing seven concrete highway bridges for Stewartville Township has been awarded to the OWEGO BRIDGE CO., of Owego, N. Y., at about $13,500.

MAGNOLIA, MISS.—Pike County Board of Supervisors has decided to use tile culverts and small concrete bridges in connection with sand-clay roads. Surveys are being made by Xavier A. Kramer, Eng., Magnolia, Miss.

ABERDEEN, MISS.—Monroe County will construct a bridge over Hanging Kettle Creek on Eden and Dukemanier Lane Road, in fourth district of the county, and a bridge over Fuller Creek near Strongs. S. P. Smith is Clk.

CHATTANOOGA, TENN.—We are officially advised that bids were received as follows on Feb. 23 by the Chicamauga and Chattanooga National Park Commission for the construction of a bridge across Chattanooga Creek on the Hooker Road. (a) item 1, 75-ft. steel span, concrete floor; (b) Item 2, plank floor; (c) Item 3, 80-ft. concrete arch span; The West Construction Co., Chamberlain Bldg., Chattanooga, (c) $7,500 (no time stated); Howard Egleston, (c) $3,953 (120 days); Nashville Bridge Co., (a) $2,900, $2,825 and $2,880; (b) $2,627, (c) $8,683 (no time stated); Roanoke Bridge Co., (b) $2,490 (no time stated); Converse Bridge Co., (a) $2,945, (b) $2,731 (150 days); Penn Bridge Co., Beaver Falls, Pa., (a) $2,975, (b) $3,390 (150 days); Joliet Bridge & Iron Co., Joliet, Ill., (a) $2,800, (b) $2,550 (120 days). Edward E. Betts is Engr.

CLEVELAND, OHIO.—Bids are asked until 11 a. m., March 19, by the County Commissioners for the construction of bridge work per Report No. 2572, concrete bridge and paving, Richmond Road, Euclid Township, and per Report No. 2373, concrete abutments Chagrin River, Mayfield Township. John F. Goldenbogen is Clk.

HURON, OHIO.—The County Commissioners, Sandusky, on Feb. 21 approved plans for a lift bridge to be constructed over the Huron River. Estimated cost, $150,000.

HAMILTON, OHIO.—The County Commissioners are having plans prepared for a bridge over the canal at Grand Boulevard. Estimated cost, about $10,000.

TOLEDO, OHIO.—C. H. FATH & SON CONSTRUCTION CO., of Cleveland, Ohio, were awarded contract by the Board of Control on March 3 for constructing the new Cherry St. bridge at $813,788. J. R. Cowell is Dir. Pub. Ser.

HARTFORD CITY, IND.—Bids are asked until 2 p. m., March 28, by L. W. Dougherty, County Audr., Blackford County, for the erection and construction of various bridges.

EDWARDSPORT, IND.—Bids are asked by the Commissioners of Knox County for the construction of a bridge across the White River, at Edwardsport.

STREATOR, ILL.—Bids are asked until 5 p. m., April 4, by John B. Patterson, City Clk., for building a bridge across the Vermillion River at Bridge St. and for grading and paving the approaches. Estimated cost, $30,000. Ralph Modjeski, 91 Jackson Boulevard, Chicago, Ill., is Engr.

URBANA, ILL.—Contract for constructing a bridge at Newcomford has been awarded to the PAN-AMERICAN BRIDGE CO., of New Castle, Ind., at $5,995.

*WILMETTE, ILL.—Contract for metal work for Sheridan Road bridge and Wilmette pumping station, bids opened on Feb. 16 by the Sanitary District of Chicago, has been awarded to the MILWAUKEE BRIDGE CO., Milwaukee, Wis., at $22,793. List of bidders noted on Feb. 24.

ST. CROIX FALLS, WIS.—L. P. Wolfe has been selected to prepare plans for a bridge between Taylors Falls and St. Croix Falls. Estimated cost, about $14,000.

*MINNEAPOLIS, MINN.—Bids will be received until 5 p. m., March 31, for the construction of bridges known as Nos. 1, 3 and 4, located on the north shore of Lake Calhoun and the south and west shores of Lake of the Isles in this city. The bids for bridge No. 1 are to be on a combination reinforced concrete and granite faced bridge; the bids for bridges Nos. 3 and 4 to be on a combination reinforced concrete and stone faced bridge and also for an all concrete bridge. All bids to be made in accordance with the specifications now on file in the office of William Pierce Cowles, Consulting Engr., 925 New York Life Bldg., Minneapolis. J. A. Ridgway is Secy. Bd. Park Comrs.

HOLLIDAY, KAN.—The County Commissioners of Wyandotte and Johnson Counties are contemplating the construction of a 300-ft. bridge over the Kaw River at Holliday. Estimated cost, $30,000.

LARNED, KAN.—The TOPEKA BRIDGE & IRON CO. has been awarded contract at $5,200, for the construction of a concrete bridge across the Pawnee River, west of here.

GRAND FORKS, N. DAK.—Bids are asked until 10 a. m., March 22, by Hans Anderson, County Aud., for the construction of steel bridges for which all bids received on Feb. 16 were rejected.

FORT SMITH, ARK.—The Bridge Commissioners are considering the construction of a steel bridge across the Arkansas River here. Estimated cost, about $500,000.

CORNING, ARK.—B. B. Holifield, Clay County Judge, has appointed T. J. Crowder and B. McKinney as bridge commissioners to prepare plans and specifications for a bridge across the Black River at Bennett's Ferry.

BELTON, TEX.—The Bell County Commissioners have awarded contract for the construction of nine iron bridges across streams in Temple and Holland districts. Estimated cost, $6,000.

LAREDO, TEX.—The National Railways of Mexico will soon let contract for the construction of its new international bridge across the Rio Grande at this point. W. O. Galbraith is Resident Eng., City of Mexico, and has charge of the preliminary work.

MUSKOGEE, OKLA.—Bids are asked by the Muskogee County Commissioners, W. E. Looper, County Clk., until March 29 for the construction of 160-ft. steel bridge over Durdeen Creek, near Webbers Falls; steel bridge, 90 ft. long, over Pecan Creek; 120-ft. bridge, steel construction, over Coody Creek, and 36-ft. arched concrete bridge.

ATOKA, OKLA.—Missouri, Kansas & Texas Ry., S. B. Fisher, Ch. Engr., St. Louis, Mo., will construct concrete arches and steel bridges in connection with double-tracking from Atoka to Limestone Gap, Okla.

MIAMI, OKLA.—The ILLINOIS STEEL BRIDGE CO., of Kansas City, Mo., has secured the contract for constructing a steel and concrete bridge over Tar Creek at Fourth St., at $5,995.

GEORGETOWN, COLO.—Bids will be received until March 19 by Charles W. Comstock, State Engr., Denver, for constructing a concrete steel highway bridge across south fork of Clear Creek near Empire Pass, Clear Creek County.

ALBUQUERQUE, N. MEX.—Bids are asked until March 11, by the County Commissioners for the construction of two steel spans as approaches to the new Almeda bridge. The spans will be 75 ft. in length.

CARLSBAD, N. MEX.—Contract for constructing bridges, bids opened on Feb. 21, has been awarded to the MIDLAND BRIDGE CO., Gibraltar Bldg., Kansas City, Mo., as follows: Eagle Draw, $2,250; Penasco, $4,950, and Pecos River, Lu Huerta bridge, $5,850.

SALINAS, CAL.—CLARENCE W. SWAIN, of Ione, Cal., has been awarded contract, at $5,293, for repairing the Carmel bridge and the construction of small bridge near Carmel bridge in Carmel and Sur Road Districts.

WHITEROCKS, UTAH.—We are officially advised that contract has been awarded to the M. J. PATTERSON CONTRACTING CO., of Denver, Colo., by the Commission of Indian Affairs, Washington, D. C., for the construction of a steel bridge at the Uintah and Ouray Agency, Utah. Estimated cost, $18,000.

Bids for the substructure of this bridge are asked until June 1 by the Commissioner of Indian Affairs.

WINNIPEG, MAN.—We are officially advised that contract has been awarded by the Board of Control to the ALGOMA STEEL BRIDGE CO., LTD., of Winnipeg, at $124,450, for the superstructure for the Louisa bridge. M. Petersen is Secy.

BUILDINGS.

(* *denotes that this work is advertised in Engineering News.*)

NEW YORK, N. Y.—We are officially advised that the plans for the parochial school and convent to be erected in connection with St. Ambrose's Church, Brooklyn, call for architecture and construction in harmony with the church erected under the supervision of the rector, the Rev. Thomas F. McGronen. The school building will be 60 ft. wide and 100 ft. deep, and it will contain 17 classrooms. There will be an auditorium with a stage for entertainments and lectures. In the basement will be playgrounds. The convent will be a 4-story building, and will house the Sisters of St. Joseph, who will teach in the school. Work on the buildings will be begun in April, and they will be completed in time for opening in the fall. The total cost will be over $100,000. The contract has been let to PETER CLEARY, 115 Marion St., Brooklyn, George H. Streeton, 103 Park Ave., New York, is Arch.

Plans have been filed for a 10-story loft building with ground floor stores, to be built on Irving Pl., at a cost of $70,000, from designs by Sommerfeld & Steckler, 19 Union Sq., W., Archs., for John J. Healy. It is to have a frontage of 23 ft. and a depth of 85½ ft., and will adjoin another loft building for the Robert Burns Realty Co., at 67 and 69 Irving Pl., the plans for which were filed at the beginning of the year. The two new buildings will replace two private residences.

Henry Corn to-day filed plans for a 12-story mercantile building to be erected at a cost of $400,000 at 74 and 76 Fifth Ave., 517 × 125 ft., with a 20-ft. L to 1 West 13th St., surrounding the northwest corner. Maynicke & Frank are Archs., 298 Fifth Ave. Mr. Corn bought the property two months ago from the Hurtt Estate.

NEW YORK, N. Y.—We are officially advised that Clinton & Russell, 32 Nassau St., have plans for a 20-story office building, 101 × 127 ft., to be erected at the northeast corner of Broadway and 42d St. The contract has been let to the C. L. GRAY CONSTRUCTION CO., 42 Broadway, and calls for a building of brick and terra-cotta. Greenwood & Co., 42 Broadway, are the owners' representatives.

Plans have been filed for a 6-story apartment house to be erected from designs by A. B. Kight, Arch., 1947 Broadway, at the northeast corner of Broadway and 180th St., for the Barnard Realty Co., of which Mr. Kight is Pres. It is to have a frontage of 105 ft. and a depth of 109½ ft., with stores on the ground floor, and will cost $225,000.

The contract to furnish granite for the proposed Municipal Building, to be erected at the Manhattan end of Brooklyn Bridge, has been let to the MOUNT WALDO GRANITE CO., of Rockland, Me. Granite to amount to $2,500,000 in cost will be required. McKim, Mead & White, 160 Fifth Ave., are Archs.

NEW YORK, N. Y.—We are officially advised that the New York Central & Hudson River R. R. Co. has let contracts for the construction of two buildings to cover the blocks between Lexington Ave. and Depew Pl., 46th and 48th Sts., Manhattan. They will be twelve stories high and will cost about $4,000,000. Each building will cover about 16 city lots and will be connected by a series of bridges, which will be built over 47th St. The work of construction will begin in about a month. The building on the block between 46th and 47th Sts., Lexington Ave. and Depew Pl. will be the first to go up, as it has been leased to several concerns, including the New York Furniture Exchange, from April, 1911. The north building will then be started. The structures will be built by JAMES STEWART & CO., 30 Church St., from plans by the Grand Central Station Architects, 314 Madison Ave. One of the features of the south building will be a coliseum three stories high. This will be used for trade conventions and the exhibitions of merchandise and machinery. There also will be clubrooms, offices and consultation rooms, all of which will be on one floor. The firm of architects mentioned above is comprised of Reed & Stem, 7 East 42d St., and Warren & Wetmore 3 East 33d St.

We are informed officially that bids will be received until about March 15 by Cram, Goodhue & Ferguson, Archs., 170 Fifth Ave., for reconstruction of St. Thomas's Church (Protestant Episcopal) at Fifth Ave. and 53d St. Dr. E. M. Stires is Rector. Estimated cost, $1,000,000.

NEW YORK, N. Y.—Bids are asked by C. B. J. Snyder, Supt. School Bldgs., Board of Education, until 4 p. m., March 21, for the general construction, etc., of additions to and alterations in Public School No. 19, on the west side of Keap St., between South Second and Third Sts., Boro. of Brooklyn.

ROCHESTER, N. Y.—Bids are asked until 3 p. m., March 26, by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., for miscellaneous changes at the extension to the U. S. court-house, post-office, etc., at Rochester, N. Y.

JAMAICA (L. I.), N. Y.—In a report recently submitted by Ralph Peters, Pres. of the Long Island R. R. Co., to the Public Service Comn., Mr. Peters stated that about $3,000,000 is to be expended for rebuilding the Jamaica station and improving the terminal facilities at this point. J. R. Savage, Jamaica, is Ch. Engr.

BUFFALO N. Y.—F. B. Ware, State Arch., Albany, N. Y., has started plans for the erection of the proposed Normal School building at Normal Ave. and 14th St. About $400,000 will be expended.

Plans have been completed for the erection of a church at Peckham and Emslie Sts. by the congregation of St. Stephen's Evangelical Lutheran Church. The building will be of pressed brick, with stone trimmings, and will have a seating capacity of 850. The dimensions of the structure will be 52 × 100 ft. The cost will be about $40,000.

BUFFALO, N. Y.—The New York Central & Hudson River R. R. Co. has submitted to the city officials and to the Public Service Commission plans for a passenger station and terminal, which it is proposed to build on what is known as the "Terrace" site, two blocks west of Main St., in the center of the city at a total cost of from $7,000,000 to $9,000,000. The station structure, which is to cost $1,000,000, will be of white sandstone, 480 ft. in length, 120 ft. in width, 80 ft. in height, with a central dome 125 ft. high. Adjoining will be canopy covered platforms to accommodate 32 tracks, which will enter the station 17 ft. below street level and will have capacity for 325 coaches, besides baggage and mail cars, for which separate trackage will be provided. A sub-station for through trains is to be built also at Clinton St., East Buffalo. The construction of the "Terrace" site station will involve the abandonment or closing of a number of streets by the city and the construction of several street viaducts over sunken tracks; also the abandonment by the State of New York and closing a portion of the city extension of the Erie Canal (a distance of about four blocks) for which legislative action by the state will be necessary. If the plans are approved by the city, the passenger terminals will be occupied by eight other railroads as tenants of the N. Y. C. & H. R. R. R. Co.

BUFFALO, N. Y.—Bids are asked by Louis P. J. Eckel, Arch., 191 York St., until March 15, for a warehouse and office building, 55 × 155 ft., two stories and basement, of brick and structural iron, to be erected at Tonawanda St. and the New York Central R. R. by the Buffalo Cooperative Stove Co. Edward Kener, Jr., is Pres., Amherst and Tonawanda Sts.

The Riverside Methodist Episcopal Church, Rev. Daniel McGurk, Pastor, Bird and West Aves., is having plans prepared for a church, of stone and brick, to be erected at the northwest corner of Potomac Ave. and Baynes St., at a cost of $40,000.

Robert North, Arch., 1330 Prudential Bldg., is preparing plans for a theater building, 66 × 135 ft., two stories, of concrete construction, fireproof, to be erected on Broadway near Fillmore Ave. by the East Buffalo Amusement Co., D. H. Coplon, Pres., 964 Broadway, Buffalo. Seating capacity, 1,600. Estimated cost, $60,000.

TROY, N. Y.—We are officially advised that seven bids for the construction of the proposed Central School building, to be erected on land acquired on Seventh St., between Congress and State Sts., were received by the Board of Contract and Supply at its meeting on March 1. Proposals for the same work were received by the Board and rejected about a month ago, upon the recommendation of E. L. Grimes, City Engr. The lowest bidder was the Charles P. Boland Co., Times Bldg., Troy. The bids received were as follows: CHARLES P. BOLAND, Troy—Natural stone, $296,400; artificial stone, $292,400 (awarded contract on first bid, on condition the Common Council appropriate the necessary money). James Dollard, Troy—Natural stone, $301,545; artificial stone, $296,680. Philip Casey, Troy—Natural stone, $305,990; artificial stone, $304,000. Raymond M. Booth, Albany—Natural stone, $297,000; artificial stone, $293,000. Connors Brothers Co., Lowell, Mass.—Natural stone, $304,000; artificial stone, $301,000. W. H. Keese & Co., Boston, Mass.—Natural stone, $329,495; artificial stone, $325,993. McGahey & O'Connor, Boston—Natural stone, $309,202; artificial stone, $307,202. Noted last week.

BRIDGETON, N. J.—The Bridgeton Board of Education has decided to invite plans from architects for a High School building to cost not more than $60,000.

NEWARK, N. J.—Bids are asked by the Board of Education, until 3.45 p. m., March 22, for constructing the Montgomery School building, to be completed Dec. 1, 1910. R. D. Argue is Secy.

PHILADELPHIA, PA.—John Sinnott, who recently purchased a suburban property on the Darby Road, at Radnor, is having plans prepared for the erection of a 3-story stone and plaster house in the Spanish style of architecture, which he purposes having erected on the ground, at a cost of $50,000. Plans are being drawn also for the erection of a 2-story stable and garage. Charles Barton Keen is Arch., Baily Bldg., Philadelphia.

J. Horace Cook, Arch. and Supt. of Bldgs. for the Board of Education, has prepared plans and specifications for a 21-division school building at Sixth and Huntingdon Sts. The estimated cost is $175,000. The building will have three stories and will provide facilities for 1,200 pupils.

C. Paul Hagerlocker, who has purchased a lot of ground near Gladwyn on the Main Line, has had plans drawn by Clyde S. Adams, Arch., 1223 Arch St., for the erection of a $70,000 residence. It will measure 80 × 32 ft., with a wing.

A permit has been granted to Amos W. Barnes, Ninth and Walnut Sts., for six 2-story apartment houses, each containing two suites of seven rooms each, to be built on Morris St., south of Rittenhouse St., Germantown, for John W. De Long, owner of the Delmar Apartment house, at Chelten Ave. and Morris St. The cost of the operation will be $60,000. The apartments are to be on a lot at Morris and Rittenhouse Sts., directly in the rear of the Delmar.

HAVERFORD, PA.—We are officially advised that Bailey & Bassett, Archs., 421 Chestnut St., Philadelphia, have been commissioned to prepare plans for a science building at Haverford College. The building will be of stone, 2 stories high with a frontage of 50 ft., and a depth of 92 ft. The estimated cost is $50,000. Estimates will be received until March 12.

WASHINGTON, PA.—The Citizens National Bank is taking bids for a 1-story marble fireproof building to cost $175,000, which will be devoted to banking. It will be erected on Main St., the principal thoroughfare of the town. John W. Donnan is Pres., John H. Donnan, Vice-Pres.; N. R. Baker, Cashier, and the directors are: A. J. Allison, James Kuntz, Jr., A. S. Eagleson, John Slater, R. V. Johnson, A. G. Harper, Alvan Donnan, Ernest F. Acheson, James M. Miller.

PITTSBURG, PA.—THOMAS REILLY, 5872 Ellsworth St., Pittsburg, has been awarded the contract to erect the new Eighteenth Regiment Armory administration building at Thackeray and Bayard Sts., Schenley Farms, Pittsburg, and will commence work at once. The contractor's bid was $141,900, and the building must be ready for occupancy by November. There were 18 bidders on this work. Bids were opened at a meeting of the State Armory Board, of which Col. Albert J. Logan, commanding officer of the Eighteenth Regiment, is a member, at a meeting in Philadelphia on Feb. 23. The State appropriation for the armory is $150,000. Bids recently asked for were too high and had to be revised, but the only change in the plan from the first design is that it will be of Cleveland blue stone instead of brick and stone. The armory will face Memorial Hall. The ground area of the structure will be 60 × 190 ft. The plans for the armory were drawn by J. F. Kuntz, of the W. G. Wilkins Co., Westinghouse Bldg. The grading of the site and the cellar for the armory have been completed.

CORAOPOLIS, PA.—Plans have been completed for the proposed $45,000 Y. M. C. A. Building at Coraopolis by MacClure & Spahr, Archs., Keystone Bank Bldg., Pittsburg, Pa. The building is to be of red brick, Colonial architecture. It will front on State St., and will be built on a lot donated. In the rear of the building will be a tennis court and ground for other outdoor sports. The structure will contain offices for a secretary and an assistant, game rooms, gymnasium, swimming pool, bowling alleys and an auditorium to seat 450, in addition to class rooms. The building committee is composed of John R. McCune, George E. Shaw and H. J. Thomas.

RICHMOND, VA.—We are officially informed that the contract for constructing a 13-story and basement building for the Virginia Trust, Richmond, has been awarded to the JOHN T. WILSON CO., Inc., of Richmond, Va., at about $200,000.

ATHENS, GA.—The Southern Ry. Co. has announced that work would be started at once for a $75,000 passenger and freight station in this city. The station will be located on the triangle between Barrett St. and the present station and River St. The freight station will be located at the junction of River and Railroad Sts., and will include the site of the present station, and the tracks of the road will be moved so as to afford access to the new passenger station. W. H. Wells is Ch. Engr. of Construction, Washington, D. C.

FORT BARRANCAS, FLA.—Bids are asked until 11 a. m., March 25, by the Constructing Quartermaster for constructing a quartermaster's storehouse at Fort Barrancas, Fla., and installing plumbing, clothing closets, electric wiring and electric lighting fixtures therein.

ASHTABULA, OHIO.—Bids are asked by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., until 3 p. m., April 11, for the construction complete (including plumbing, gas piping, heating apparatus, electric conduits and wiring), of the U. S. post-office at Ashtabula.

COLUMBUS, OHIO.—David Riebel & Sons, Archs., New First National Bank Bldg., are preparing plans and specifications for a school building, to be erected by the Board of Education of Columbus, on Dana Ave.

TOLEDO, OHIO.—The H. J. SPIEKER CO. has been awarded the contract for the erection of the building for the Tiedtke Bros. Co., to be located at Adams and Water Sts., with a 40-ft. entrance on Summit St. The contractor will begin at once on the improvement and expects to have the building ready for occupancy by Nov. 1. The store will be located on the old Conant property, the buildings of which are to be removed. The lot is in the rear of the H., M. & R. Shoe Co.'s store, between the alley and Water St. The building will have a frontage on Adams St. of 110 ft., 265 ft. on Water St., 170 ft. on the side adjoining the Rail-Light property, and 260 ft. on the alley. It will be five stories high on Water St. The structure will be of mill construction with an exterior of red brick. The store on Water St. will be connected with the Manufacturers' R. R. by a switch.

GROVE CITY, OHIO.—At a special election held in Grove City recently a bond issue was approved for the erection of a high school buildings to consist of four rooms and an auditorium. Plans will be ready for bids soon.

CINCINNATI, OHIO.—Bids are asked by the Clerk of the Board of Education until noon, March 28, for furnishing all materials and doing all work necessary to complete the addition to the Winton Place Public School building, located on the southeast corner of the Winton Road and Hand Ave., in Winton Pl., Cincinnati C. W. Handman is Business Mgr.

MADISON, IND.—PULSE & PARKER, of Greensburg, Ind., have been awarded the contract to build three additional buildings at the Southeastern Insane Hospital at Madison.

NEWCASTLE, IND.—The Pennsylvania R. R. Co. has bought a site on which to build a new passenger station in this city.

SPENCER, IND.—The Vandalia R. R. Co. will build a storehouse here. J. L. McKee will have charge of letting the contract.

CANNELTON, IND.—Philip Wittmer will soon ask for bids for the construction of a hotel in Washington St.

INDIANAPOLIS, IND.—The State Executive Committee of the Y. M. C. A., S. F. Wallick, Chn., and E. E. Stacy, Secy., are preparing to erect buildings at Gary, Kokomo and Laporte. These structure will cost about $100,000 each.

Louis A. Coleman and Henry Dollman have purchased a site on West Market St., on which to erect a theatre building. Bids will be in order later.

Plans for a mercantile building, to be erected at 29-37 North Illinois St., by Joseph A. Rink, on the site of the old Y. M. C. A. building, have been submitted to the Building Inspector for approval. The plans call for an iron, brick, stone and concrete structure, faced with terra-cotta on the Illinois St. side. The building will have a basement and will be four stories high, with a balcony floor above a part of the first floor, and an attic floor under the roof. The Illinois St. front will be large terra cotta and plate glass. The building will front 71.3 ft. on Illinois St., and will have a depth of 120 ft. According to the specifications the first two stories must be completed by Aug. 1, and the remainder of the building by Aug. 15.

The Board of Public Works is planning to ask for bids for the construction of a fire station on South and New Jersey Sts.

ELWOOD, IND.—The Indiana Union Traction Co. will receive bids for the construction of a passenger station at Elwood, as soon as plans can be completed. A. W. Brady is Pres.

DETROIT, MICH.—P. Dederich, Arch., 1307 Chamber of Commerce Bldg., Detroit, is preparing plans and specifications for a church, 67 × 134 ft., for the Roman Catholic Church of Our Lady of Sorrows, Rev. Fr. Henry Szoen, Rector, 18 Catharine St., Detroit.

The Trustees of Harper Hospital have decided to erect a building at an estimated cost of $300,000; also to remodel the old building. A committee has been appointed. J. L. Hudson is Pres., Gratiot Ave. and Farmer St., Detroit.

CHICAGO, ILL.—Plans have been completed for a 3-story orphan asylum, 80 × 300 ft., to be erected for St. Hedwig's Polish Roman Catholic Asylum, in Norwood Park. Northman & Steinbach are Archs., and the proposed building will cost $100,000.

The Chicago Telephone Co. is to erect at once a 16-story office and downtown exchange building on the property extending from 191 to 197 Washington St., just east of the present main office at Washington and Franklin St., according to the Chicago "Record-Herald." The building is to represent an investment of approximately $550,000. Although the building will have 16 stories the foundation and steel work will be sufficiently strong to enable the company to add six more floors, making a 22-story structure, at any time in the future that such facilities become necessary. Holabird & Roche, Archs., Monadnock Bldg., are preparing the preliminary drawings for the building and within a few weeks will have the plans and specifications completed. The site to be utilized for the structure is occupied by the old Forbes Building. This comprises ground space measuring 80 × 90 ft., and the building is four stories high. Part of this space has been used by the telephone company for some years. Work of wrecking the Forbes building is to be started at once and the structure which is to replace it is to be completed and ready for occupancy by May 1 of next year. In many respects the building to go up will be similar to the present corner building of the Telephone Company. There will be a narrow space between the two buildings and the arrangement will give the new building light on all four sides.

The Harris Safe Deposit Co. has awarded to WELLS BROS., 98 Jackson Boulevard, the general contract for erecting the Harris Trust Building, which is to be built at 140-146 Monroe St. This is to be 20 stories high and will cost, aside from the cost of the land, about $2,000,000. Noted last week.

DES MOINES, IOWA.—J. D. Whisenand will soon award the contract for the construction of a $50,000, 3-story building on the site of the Boody Block, which was destroyed by fire last spring. The building will be devoted to store rooms, offices and apartments and will be completed by Aug. 1. The structure will cover 45 × 132 ft., and the foundations will be constructed heavily enough to accommodate [illegible] stories. Sawyer & Watrous are preparing plans for the building.

CROOKSTON, MINN.—The State Board of Control, St. Paul, Minn., received bids on March 1 for the construction of a woman's dormitory and a gymnasium [illegible] library building at the Crookston Experimental Station. The Gray Construction Co., of Watertown, S. Dak., was the lowest bidder on both buildings, bidding $27,829 on the former and $41,459 on the latter. C. H. Johnston, Manhattan Bldg., St. Paul, is Arch.

ST. PAUL, MINN.—The contract for the excavating for the new Y. W. C. A. building, to be erected on Fifth St., [illegible] Washington St., has been awarded to the [illegible]ORGE J. GRANT CONSTRUCTION CO., [illegible] New York Life Bldg., city. C. H. Johnston, Manhattan Bldg., is Arch. It will be five stories high, fireproof, and will [illegible] $250,000.

ST. PAUL, MINN.—Plans are [illegible] prepared by E. J. Donohue, Arch., [illegible]illan Block, city, for the construction of a 3-story pressed brick and cut stone [illegible] and flat building at St. Peter St. and College Ave., St. Paul. It will be of fireproof construction, 74 × 150 ft., with electric elevator and marble and tile work. Cost [illegible]45,000.

STILLWATER, MINN.—The State Board of Control, Charles Halvorson, Chn., St. Paul, has awarded the contract for the general construction contract of the state [illegible]son to be built at Stillwater to O. H. OLSON, Stillwater, Minn., at $1,322,947. The contract for the electrical and mechanical equipment was let to the HANLEY-CASEY CO., 37 Ohio St., Chicago, on a bid of $54[illegible]. C. H. Johnston, Manhattan Bldg., St. Paul, is Arch.

WICHITA, KAN.—Badgley & [illegible], Archs., 6110 Euclid Ave., Cleveland, Ohio, are preparing plans and specifications for a church for the First Presbyterian Society of Wichita. O. A. Keach is Chn. of Bldg. Com., Sedgwick Bldg., Wichita, Kan.

OMAHA, NEB.—Henry Haubens, Pres. of the Lion Bonding Co., has announced the erection of a $100,000 business block on the northeast corner of Twelfth and Farnam Sts. for the Freeland Bros., the Ashley Automobile Co., and the Omaha Aeroplane Agency. The structure, which is to be located on the site of the old Wiles homestead, will be four stories high, with a basement, of brick and stone construction. It will be equipped with both passenger and freight elevators. The dimensions will be 44 × 132 ft. Construction is to begin at once.

COLUMBUS, NEB.—Bids are asked by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., until 3 p. m., April 14, for the construction complete (including plumbing, gas piping, heating apparatus, electric conduits and wiring) of the U. S. post-office at Columbus, Neb.

ST. LOUIS, MO.—The Savoy Investment Co., which already has erected five apartment houses on the property at the northwest corner of Delmar and Union Boulevards, and has another to cost $100,000 under construction, has announced its plans to build two other structures on the same property, at an aggregate cost of $200,000. Each building will be six stores high, will be fire and sound-proof, and will contain six apartments of ten rooms each. One will have a frontage on Delmar Boulevard of 83 ft., and a frontage on a 50-ft. wide court of the same length, and will be only 27 ft. wide. The entrance to all apartments will be from a common hall, but electric elevators will convey the tenants to and from their suites. One of the buildings will front on Delmar Boulevard, and the other on the Savoy Court, a private circular street, which the owners of the property cut through the original piece of ground. Plans and specifications have been prepared for both buildings and work will begin shortly on them.

The Rock Island System has completed plans for an independent terminal system in North St. Louis covering several acres. Since its separation from the 'Frisco System the Rock Island has been preparing to make St. Louis one of its great freight and passenger traffic centers. An appropriation of approximately $4,000,000 has been made for improvement purposes. The line between St. Louis and Kansas City is to be reduced ten miles, giving the Rock Island the short line between these cities. D. G. Reid is Chn., 115 Broadway, New York.

FORT SAM HOUSTON, TEX.—Bids are asked by P. W. Guiney, Constr. Q. M., until 11 a. m., March 31, for the construction, plumbing, hot air heating and electric work in one double set of Hospital Corps Sergeants' quarters at Fort Sam Houston, Tex.

DENVER, COLO.—Plans and specifications for the Gano-Downs building, to be at the corner of Court Pl. and 16th St., have been completed. Specifications call for a fireproof building of steel and concrete five stories high, so constructed that three stories can be added when conditions demand." Gothic style will be followed in the construction. Williamson & Sterner are Archs. The estimated cost of the five stories is $225,000, but it is expected that it will exceed that figure. Ground will be broken at once.

ALAMEDA, CAL.—See item under Sewerage.

RIVERSIDE, CAL.—The contract to erect a 4-story steel and concrete Class A store and office building for the First National Bank has been awarded to C. J. KUBACH & CO., Pacific Electric Building, Los Angeles, Cal., on a percentage basis. Parkinson & Bergstrom are Archs., Security Bldg., Los Angeles. Estimated cost, $125,000.

SAN FRANCISCO, CAL.—Bids are asked by the Light-House Engineer, San Francisco, until noon, March 25, for constructing reinforced concrete light building, frame fog signal building, frame principal keeper's dwelling, two frame assistant keepers' dwellings, frame blacksmith and carpenter shop, frame barn and three frame outbuildings at Punta Gorda Light Station, Cal.

The Crocker Hotel Co. has taken out a permit to erect a 4-story brick hotel building in the north line of Geary St., 165 ft. west of Powell St. The estimated cost is $100,000.

L. [illegible] Sly will build a 5-story brick apartment house in the south line of O'Farrell St., 137 ft. west of Jones St., to cost $120,000.

S. [illegible]senbery has taken out a permit to erect a 4-story brick apartment structure in the south side of Eddy St., 137 ft. east of Larkin St., to cost $40,000.

A [illegible]-story and basement Class C structure, on plans by H. Geilfus & Son, Archs., 150 Fulton St., will be erected in the west line of Leavenworth St., 57.6 ft. south of Eddy St. The owner is Adolph Meyer. The structure will be diveded into two and three room partments, 48 in all. The ground area is 52.6 x 100 ft. The estimated cost is $60,000. The front of the building will be of pressed Roman brick at the base and the remainder will be of glazed brick with terra-cotta trimmings.

Charles Rosseau, Arch., reports plans for the following buildings, according to the San Francisco "Call": A 5-story Class C hotel building to be erected at a corner of Geary and Polk Sts.; a 3-story brick and frame apartment hotel building to be erected at the northeast corner of Pine and Leavenworth Sts.; a 5-story apartment building to be erected on the lot in the north side of Pine St., immediately west of Leavenworth St.; a 3-story building, laid off into 22 French apartment flats of three and four rooms each, to be erected in the north side of Washington St., 168 ft. west of Leavenworth St.; a 3-story building containing flats and stores, to be erected at the southwest corner of California and Leavenworth Sts.; 16 apartment flats of four and five rooms to be erected in the north side of Sacramento St., immediately east of Polk St.; 14 apartments of two, three, four and five roomss, now being erected in the north side of Fell St., 192 ft. west of Laguna St.; six flats of five rooms, to be erected in the south side of Vallejo St., east of Polk St.

A 6-story and basement brick hotel building will be erected in the west line of Fourth St., 92 ft. north of Howard St. This will contain 90 rooms, with all modern improvements and conveniences. The first floor will contain three stores. The ground space of 45 x 85 ft. will be entirely occupied. The exterior of the hotel will be of cream colored pressed brick with white trimmings. The architect is N. W. Sexton, Chronicle Bldg. The cost is approximately $45,000.

LOS ANGELES, CAL.—The Board of Education has awarded contracts for erection of annex to the Polytechnic High School to J. V. McNEIL, I. W. Hellman Bldg., Los Angeles, at $61,443.

Construction of the 11-story bank and office building to be erected at the northwest corner of Spring and Sixth Sts., by the Los Angeles Trust & Savings Bank will be begun March 20. The cost will be about $500,000. Razing of the 3-story brick building on what will be the site of the new structure has been begun. Parkinson & Bergstrom, Archs., Security Bldg., prepared the plans, and PAUL HAUPT, Laughlin Bldg., has the general construction contract. Both fronts will be faced with white mat-glazed terra cotta, except a 4-ft. base of polished granite, according to the Los Angeles "Express." The main entrance to the bank will be from Spring St., and will be recessed to form a logia. The ceiling will be of terra-cotta and the floor and walls of marble. The main banking room will have a clear ceiling of 25 ft., and columns, which will be placed in it, will be 40 ft. apart. The center portion will have a clear span 40 x 115 ft. The room will extend back to the columns 10 ft. on each side. The bank counters will be on the sides, with a public space in the center. The counter fronts will be marble to the top, and above will be bronze. The walls of the room will be of marble, and the ceiling will be paneled in plaster. The marble to be used probably will be skyros or Italian pavenezzo. The principal entrance to the office portion of the building will be from Sixth St. The walls and ceiling of the vestibule will be of terra-cotta. There will be an entrance hall, 13 x 32 ft., which will be floored with marble and have marble wainscot and plaster ceiling. Each of the upper ten floors will be arranged into 22 offices, of an average size of 13 x 19 ft. Each room will have hot and cold water, closets and electric and desk lights. Gas and sewer connections, hot and cold water, compressed air and other facilities will be provided for doctors and dentists. The offices will be finished in mahogany, and the corridors will have marble floors and wainscot. A safety deposit department will be installed in the basement, which will have a circular stairway from Spring St., and elevator connections with all the floors. The power room will be in a sub-basement and will be equipped to provide the building with heat and hot water. A complete system for ventilating the building will be installed. There will be three elevators of the plunger-hydraulic type. All the rooms in the building will be outside rooms. The exterior construction will be of steel and terra-cotta. The contract for granite work at the corner of Sixth and Spring Sts. has been let to BLY BROS., 678 Utah St., at $10,150. The contract for the terra-cotta work has been awarded to GLADDING, McBEAN & CO., of San Francisco, at $50,000.

LOS ANGELES, CAL.—The following contracts have been awarded by the Board of Education for the Manual Training School, Los Angeles, Parkinson & Bergstrom, Security Bldg., Archs.: General contract, to the LOS ANGELES PLANING MILL CO., 1812 Industrial St., at $203,787; plumbing, to the THOMAS HAVERTY CO., 517 South Los Angeles St., $24,000; heating and ventilating plant, MACHINERY & ELECTRICAL CO., 351 North Main St., $14,823.

SACRAMENTO, CAL.—Waterhouse & Lester, dealers in vehicle hardware and merchant steel, are planning to erect a 1-story building at Sacramento.

FRESNO, CAL.—Bids are asked by the Board of Education until March 21 for the construction of a high school. Plans and specifications have been prepared by Louis S. Stone, Arch., Oakland, Cal. Industrial department, shops, laboratories, etc., are included in the plans. Estimated cost, $60,000.

SAN DIEGO, CAL.—Architects soon will be requested to submit competitive plans for a church structure to cost $50,000 by the Methodist Church, South, of this city. Rev. J. F. French is Pastor.

FORT MASON (San Francisco post-office), CAL.—Bids are asked by Maj. George McK. Williamson, Q. M., until noon, April 1, for constructing an administration building and two storehouses, including grading, installing plumbing, heating, electric wiring and conduits, elevators and fire extinguishing systems in same at Army Supply Depot, Fort Mason, San Francisco, Cal. Rankin, Kellogg & Crane are Archs., 1012 Walnut St., Philadelphia, Pa.

HALIFAX, N. S.—It is proposed to erect a naval academy here, in connection with the Naval Branch of the Department of Marine and Fisheries, to be formed this year. Rear Admiral C. E. Kingswill is Commander of Marine Service of Canada, at Ottawa, Ont.

LONGUEUIL, QUE.—The Department of Militia and Defence has purchased 180 acres of land at Longueuil, where a military depot will be erected. Sir Frederick Borden, Ottawa, is Minister of Militia and Defence.

MONTREAL, QUE.—It has been decided by the directors of the Dominion Express Co. that there should be no hotel in the new building to be erected where the St. Lawrence Hall now stands. It was also decided that for the present only the building facing on St. James St. and running back to Fortification Lane should be dealt with, the structure in the rear, facing on Craig St., being left as it is. What will be done with this will be decided later on. In the meantime it has been decided to tear down the St. Lawrence Hall early this spring, and to erect on its site a 10-story office structure, to cost about $500,000. Competitive plans for the building had been called, and five plans were submitted, four from Montreal architects and one from Toronto. These were presented to W. S. Painter, Chief Arch., Canadian Pacific Railway Co., Montreal, who finally accepted the plans submitted by E. & W. S. Maxwell, Archs., 6 Beaver Hall Sq., Montreal. The building, as designed, provides for offices on the ground floor for the Dominion Express, the Canadian Pacific city offices and the offices of the New York Central, while the upper stories will be devoted to office purposes. In the meantime the offices occupied by these companies will be moved to the south side of St. James St., and the staff of the Dominion Express Co. will be located in the building to the rear. The work of tearing down the present structure will start early this spring, and it is expected that the new building, to be known as the Dominion Express Building, will be finished about December, 1911. W. S. Stout, Toronto, is Pres. and Gen. Mgr. of the Dominion Express Co.

WINNIPEG, MAN.—D. W. Bellhouse, Arch., 120 Lombard St., is making sketches for a 4-story warehouse and a basement, with allowance for the addition of two more stories to be erected this year.

P. M. Clemmens, Arch., 331 Garry St., is drawing plans for a $45,000 apartment block, to be erected this year on William Ave.

MOOSE JAW, SASK.—At a meeting held recently, arrangements were made for the immediate preparation of plans calling for a 3-story brick and stone building at a cost of $100,000 for the Saskatchewan College, to be built at Moose Jaw. This is to be added to later on the unit system. The whole college will comprise three buildings, costing about $300,000.

YORKTON, SASK.—Bids will be received at the office of W. E. Pinkerton, Secy.-Treas. of the Yorkton Institute, Yorkton, until 3 p. m., March 15, for the construction of a collegiate institute, including excavating, mason work, carpentry work, painting, iron work, galvanized iron work, heating, ventilations and plumbing work.

REGINA, SASK.—WILSON & WILSON have been awarded the contract for a public school here, at $68,750.

KELOWNA, B. C.—Bids will be received until March 26 for the erection of the proposed church of St. Michael and All Angels. W. A. Peters is Arch., Kelowna, B. C.

WATER-SUPPLY—IRRIGATION.

(* *denotes that this work is advertised in Engineering News.*)

HILLSBOROUGH, N. H.—The development of a large water storage basin at the headwaters of the North Branch of the Contoocook River, chiefly in the town of Stoddard, is planned by persons interested in the numerous manufacturing plants located along the river. At a meeting of these manufacturers here a temporary organization was formed, with former Governor David H. Goodell, of Antrim, as chairman. The officers were authorized to have an immediate survey made of what is known as the Long Pond Reservoir, which was formed a few years ago by the erection of a dam near the head of the North Branch, effecting the combination of a number of ponds which were located near together in Stoddard, Nelson and Washington. This reservoir is about seven miles long, with an average width of about a quarter of a mile. By the construction of a larger dam the manufacturers believe that the contour of the country in that region will permit of such an enlargement of the basin as will forever protect manufacturing plants on the river from water shortage during periods of drouth. Among the plants along the Contoocook are cutlery factories at Antrim, woolen mills at Hillsborough, paper mills at Contoocook and flour mills and electric plants in Concord.

NEW YORK, N. Y.—Bids are asked by Henry S. Thompson, Comr. Water Supply, Gas and Electricity, until 2 p. m., March 16, for furnishing, installing, maintaining and reserving for the use of the high-pressure fire service, all apparatus and equipment necessary for generating and transmitting 3,250 KW. of 3-phase, 6,600-volt, 25-cycle electric power, and furnishing and delivering this power, under the terms of this contract, from March 16, 1910, to Dec. 31, 1910, both inclusive, at each of the high-pressure fire service pumping stations, located in the Boro. of Manhattan, at Oliver and South Sts., and at Gansevoort and West Sts., respectively.

NEW YORK, N. Y.—Bids are received as follows by the Department of Water Supply, Gas and Electricity on March 2 for furnishing, delivering and laying water mains in Clason Point Road and in Burke St., New York: Hanover Contracting Co., $29,244; Wilton Construction Co., $24,801; Patrick Doris, $30,008; Louis D. Gregory, $26,609; Henry E. Fox, $27,677; Atlanta Contracting Co., $29,610; E. M. Mullen & Co., $31,105; Daly, McAvey & Grippe, $26,908; L. H. De Ambra, $35,972; Haggerty Contracting Co., $26,794; Empire City Contracting Co., $31,115; P. F. Flinn, $25,783.

Bids were also received as follows, same date, for furnishing, delivering and laying water mains in Grand Boulevard and Concourse and in 181st St.: Hanover Contracting Co., 215 West 120th St., New York, $279,543; Wilton Construction Co., $283,747; Louis D. Gregory, $284,699; Atlanta Contracting Co., $311,426; O'Leary & Flanigan, $280,727; F. V. Smith Contracting Co., $317,219; Goodman Contracting Co., $332,790; D. Cuzzio, $349,633; J. H. Gray Co., $350,979; J. C. Rodgers, Jr., $340,050; James R. Brown, $317,119; C. W. Collins, $310,603; Merrill Ruckgaber Co., $408,555.

NEW YORK, N. Y.—Bids were received on March 8 by the Board of Water Supply for furnishing and delivering eight 3 ft. x 8 ft. twin sluice gates, eight 20-in. hand-operated gate valves, ten 60-in. gate valves with individual electrical drive, four 60-in. gate valves with gang drive, two 60-in. hydraulically operated gate valves and appurtenances and three lines of floor drive shafting for structures at Ashoken reservoir, near Browns Station, Ulster County, and at Croton ake siphon, Westchester County, New York: Coffin Valve Co., Neponset, Boston, Bass., $151,749; Wheeling Mould & Foundry Co., $165,000; Ogden Iron & Steel Co., 147 Cedar St., New York, $181,500; Pittsburg Valve & Foundry Co., Pittsburg, Pa., $166,250.

*FORT HANCOCK, N. J.—Bids are asked by C. T. Goodier, Constructing Q. M., U. S. A., until noon, April 6, for the construction of a pumping plant and installation of machinery at Fort Hancock.

WALLINGTON (Rutherford post-office), N. J.—We are officially advised that bids were received as follows on Feb. 28 by the Mayor and Council for the construction of a reinforced-concrete water reservoir and extension of artesian wells from plans on file in the office of A. L. Pettersen, Boro. Engr., Passaic: (a) Total, including pumping and furnishing water; (b) total, excluding pumping and furnishing water; (c) total, not including roof, but furnishing water; (d) total, not including roof and not furnishing water. The lowest bid was that of Rundell & Paxton, Reading, Pa., at (a) $12,229; (b) $11,441; (c) $10,125, and (d) $9,388. Chris De Keyser is Boro. Clk.

.WASHINGTON, D. C.—Bids are asked by the Quartermaster, U. S. Marine Corps, Mills Bldg., Washington, until March 14, for furnishing one tower and tank, tower to be 4-post, angle steel, substructure 20 ft. and tank of standard construction, 10,000 gallons capacity, constructed of 2-in. lumber, and for furnishing complete over well one pump for 6-in. pipe, one 6-HP. standard vertical gasoline engine.

WILLIAMSBURGH, VA.—See item under Light and Power Plants.

PORTSMOUTH, VA.—A bill has passed the Virginia Legislature, authorizing the following-named commissioners, Henry Kirn, T. J. Barlow and S. P. Oast, of Portsmouth, to spend $75,000 in investigating a new water supply for Portsmouth and to sell bonds for $600,000 for the construction of new water-works in the event the private water company now supplying the city with water will not sell its plant at a reasonable sum to the city.

ASHEBORO, N. C.—The city proposes to construct water-works. Estimated cost, about $50,000. H. M. Worth is Mayor.

ROCK HILL, S. C.—See item under Light and Power Plants.

FLORENCE, S. C.—The city has engaged Newton A. Johnson, of Florence, as engineer to supervise the extension of the water-works.

MARSHALLVILLE, GA.—The Elberta Crate Co., J. M. Simmons, Mgr., will construct a water-works and electric light plant.

SHELLMAN, GA.—The city has voted $8,000 of bonds for improvements to the water-works, including air-lift fire pump, 100,000-gallon concrete reservoir and 4,500 ft. 4-in. c.-i. pipe. C. P. Payne is Supt. W.-Wks.

EDISON, GA.—The city has voted $17,000 of bonds for the construction of water-works. C. J. Jenkins is Mayor.

GADSDEN, ALA.—The citizens voted on Feb. 24 to issue $60,000 of bonds for water-works extension. W. T. Murphree is Mayor.

HUNTSVILLE, ALA.—The Gurley Light & Power Works Co. proposes to purchase new or second-hand a sloam deep well pump to lift 500 or 600 gallons of water per hour 100 ft., a closed feed water heater about 200 HP., and a steam whistle.

JOHNSON CITY, TENN.—The city will construct a 5,000,000-gallon covered reservoir and a 12-mile pipe line 18 or 20 ins. in diameter. W. M. Dunlap is City Comr. and Engr.

ZANESVILLE, OHIO.—The lowest bid opened on March 1 by the city for about 135 tons of pipe and fittings to be used to enlarge water mains in Moxahala Ave. was that of J. B. Clow & Sons Co., of Chicago, Ill., at $25 per ton, and 2½ cts. per lb. for fittings.

CINCINNATI, OHIO.—Bids will be received by Ernest Von Bargen, City Audr., until March 14 for $200,000 of bonds for improving and extending the water-works.

FORT WAYNE, IND.—Bids will be received until March 15 by the Board of Public Works for furnishing 3,000 to 9,000 water meters.

PERU, IND.—The city will spend about $50,000 for machinery for the water-works and electric light plant. Smith, Hinchman & Grylls, of Detroit, Mich., are Engrs.

HAMMOND, IND.—Bids are asked by the Board of Public Works until 10 a. m., March 21, for furnishing and laying ¾-in. lead water service pipe connections in Waltham St.

CHICAGO HEIGHTS, ILL.—All bids opened on Feb. 18 by the city for new pumping equipment, including four deep well pumps, two service pumps, transformers, switchboard and a drilled well have been rejected, owing to a defect in the specifications. W. E. Lennertz is City Clk.

PEORIA, ILL.—A pneumatic water pumping system is being installed in the buildings owned by the Johnson Coal Drill Co., 3100 to 3118 South Adams St. The contract for the plant has been let to M. H. SCHILLING.

ROCK ISLAND, ILL.—Contract for laying the water main in the Sixth Ward south of 16th Ave., and from 24th to 30th Sts., has been awarded to P. F. TRENKENSCHUH, whose bid was the lower of the two submitted to the Board of Local Improvements. Cost, $15,000. The bid was not made upon the job itself, but on the amount and kind of pipe which it will be necessary to lay. The Central States Construction Co., of Chicago, was the only firm besides the successful bidder which submitted figures for the work. In the figures following the first one is the price made by Mr. Trenkenschuh and the second is that of the Chicago firm: 12-in. pipe (all figures include laying), $2.27, $2.30; 8-in. pipe, $1.55, $1.57; 6-in. pipe, $1.10, $1.10; 12-in. valves, $60, $62; 8-in. valves, $40, $40; 6-in. valves, $30, $31; fire hydrants, $50, $50, and specials, $700, $780.

WATERLOO, IOWA.—The Trustees of the City Water Works are preparing plans for the proposed improvement to the water-works, to include a new artesian well, big clear-water reservoir, two new pumping engines, increase in fire pressure, two additional river mains and more city fire hydrants. Estimated cost, about $155,000.

ELY, MINN.—The City Council has awarded contract to furnish 12-in. c.-i. water pipe to JAMES B. CLOW & SONS CO., of Chicago, Ill., at $29.50 per ton.

STILLWATER, MINN.—The city is planning the construction of water-works, with a modern high duty pumping engine of the horizontal directing type.

ERIE, KAN.—Contracts for constructing water-works and electric light plant has been awarded to FRED. M. CLARK, of Savannah, Mo., at about $42,000. Bids were opened on Feb. 17. Burns & McDonnell, Scarritt Bldg., Kansas City, Mo., are Engrs.

KANSAS CITY, KAN.—Contract has been awarded by the city for a 15,000,000-gallon pump to the SHORT MFG. CO., city, at $18,700.

HAVELOCK, NEB.—The citizens on Feb. 15 voted to issue $50,000 of bonds for the construction of water-works from the plans of Grant & Letton, F. & M. Bldg., Lincoln.

ABERDEEN, S. DAK.—Bids will be received until March 14 at the office of F. W. Raymond, City Audr., for water-works supplies, to include two cars of 6-in., No. 38, and one car of 4-in., No. 24, c.-i. pipe, twelve Eddy or Ludlow hydrants, 4-in. connection, two 2½-in. nozzles, twelve 6-in. and six 4-in. Eddy gate valve, 300 ¾-in. and 100 1-in. Mueller corporation stop cocks, 300 ¾-in. and 100 1-in. Mueller roundway inverted curb cocks, 10,000 lbs. of 1-in. extra strong lead pipe, 4 lbs. 12 ozs. per ft.; 40,000 lbs. of ¾-in. extra strong lead pipe, 3½ lbs. per ft., etc.

MALDEN, MO.—The city has voted $20,000 of bonds for enlarging and improving the water-works and electric-light plant.

CONWAY, ARK.—The City Council has appointed a Commission to investigate cost of installing water-works.

SEARCY, ARK.—The Water and Sewer Commissioners have received a report of the engineer employed to make estimate, plans and specifications for water-works.

PARIS, TEX.—The citizens on Feb. 24 voted to issue $20,000 of bonds for extending the water mains. Bids for construction of mains will probably be received in June.

PEARSALL, TEX.—It has been estimated that the proposed water-works will cost about $50,000. C. F. Presler, of Pearsall, is Engr.

CHILDRESS, TEX.—The city proposes to lay about 10,000 ft. of 8-in. pipe and construct a pumping station; cost, about $12,500. John B. Hawley, of Fort Worth, is Engr.

LAKE CLIFF, TEX.—Charles A. Mangold and associates have retained F. H. Lancashire, of Dallas, Tex., to do preliminary work and make designs for the construction of a dam, core wall, and spillway here.

***MILES, TEX.—Bids will be received by the Mayor and City Council until April 1 for the purchase by the city of all material required in the construction of a system of water-works, being approximately 11,500 ft. 4-in., 3,000 ft. 6-in., 35 fire hydrants, eleven valves, one 350-gallon triplex pump, one air compressor, power driven, one 50-HP. gasoline engine. Specifications can be had by addressing O'Neil Engineering Co., Dallas, Tex.**

GREENVILLE, TEX.—Contract for a deep well at the water-works plant has been awarded to C. L. WITHERSPOON, of Corsicania, at about $11,000.

•RAMONA, OKLA.—Bids will be received by A. A. Mikel, Clk., until April 11, for the purchase of $18,000 of Ramona water-works bonds, running for a period of 20 years, with interest at 6% per annum, payable semi-annually in the town of Ramona. Bonds dated Jan. 1, 1910.

•HENRYETTA, OKLA.—We are advised that date for opening bids for standpipe, etc., for this city, noted on advertising page 52 in this issue, as March 15, has been changed to March 22.

ENID, OKLA.—The city has voted $25,000 of water-works bonds. Walter H. McKenzie is Mayor.

ASPEN, COLO.—On Feb. 23 maps were filed for the reservoir site of the Colorado Power Co., on the Roaring Fork, by Harry House, of Pueblo. It will be 350 ft. wide, 100 ft. long, and will back up the water for three-quarters of a mile, and contain 34,000,000 cu. ft. of water, which will be used for power and irrigating. Estimated cost, $250,000.

KENT, WASH.—Bonds for $73,000 have been sold, the proceeds to be used for the construction of a pipe line from the Springs. L. E. Price is City Clk.

BANNING, CAL.—The Cabazon Land & Water Co. has been incorporated at Riverside, Cal., to improve and reclaim a tract of desert land near Banning. Capital, $128,000.

SANTA ANA, CAL.—Bids are asked until March 21 by the Board of Trustees for 36 tons of 4-in. c.-i. water pipe. Edward Tedford is City Clk.

MERIDIAN, IDAHO.—The citizens on Feb. 12 voted to issue $20,000 of bonds for the construction of water works.

TORONTO, ONT.—The City Council on Feb. 28 awarded contract to the CANADA FOUNDRY CO., of Toronto, for c. i. pipe for the new drainage system at $12,479.

WINNIPEG, MAN.—The Canadian Pacific Ry. Co. will spend $12,000,000 on irrigation on the lands of Western Alberta. Mr. J. S. Dennis, assistant to the second vice-president, states that the company has now practically completed the irrigation works in the western section of the block comprising some 1,600 miles of canals and ditches, and the plans and estimates which were submitted to the management covered the extension of the system to the eastern and central sections of the block, and involved a further expenditure over and above what had been spent in the western section.

Bids will be received until April 4 for the supply of water pipe, valves, and hydrants. M. Peterson is Secy. Bd. of Control.

WINNIPEG, MAN.—See item under Manufacturing Plants.

SEWERAGE.

(* *denotes that this work is advertised in Engineering News.*)

BROOKLYN, N. Y.—Bids are asked by Alfred E. Steers, Boro. Pres., until 11 a. m., March 23, for all labor and materials required for the reconstruction of sewers in several streets.

LONG ISLAND CITY (L. I.), N. Y.—Contract for constructing sewers in the Hunters Point section has been awarded by Lawrence Gresser, Pres., Boro of Queens to J. L. SIGRETTO, 215 Montague St., Brooklyn, at $32,523. Bids were opened on Feb 28, List of bidders noted last week.

Contract for constructing a sewer in Fourth Ave. was awarded to GABRIEL HILL, Ravenswood, L. I., at $5,633.

MEDINA, N. Y.—Contract for constructing an addition to the sewerage system, bids opened on Feb 23,, has been awarded by the Sewer Commissioners to FRED A. GOTT, of Hamburg, N. Y., at $27,750. List of bidders noted on Feb. 24.

ROCHESTER, N. Y.—The city proposes to rebuild the Lake Ave. outlet sewer. Estimated cost, $80,000.

NEWARK, N. J.—The Board of Public Works on Feb. 27 awarded contract for the construction of the East Branch storm water sewer No. 2 to D'AMATO STEFANELLI, at $16,948.

CRANFORD, N. J.—Bids are asked until 8 p. m., March 16, by the Township Committee for the construction of sewers and appurtenances in Union Ave., North Orchard St., Garden St., Cranford Ave., Grand St., and Bloomingdale Ave. Plans and specifications may be seen at the office of Jacob L. Bauer, Engr., 130 Broad St., Elizabeth, N. J.

SUSQUEHANNA, PA.—Plans are being prepared for the sewage disposal plant to be established here.

CRAFTON, PA.—Bids will be received by the Cauffiel Co. for laying a sewer along Norma St. to connect with the sewer in Steuben St., in the Borough of Crafton, until 3 p. m., March 12. Plans and specifications can be seen at the office of McBride Surveying & Engineering Co., Ltd., Room 807, Fitzsimons Bldg.

WILLIAMSBURG, VA.—See item under Light and Power Plants.

RICHMOND, VA.—The Mayor has approved the ordinance providing for the construction of a number of sewers out of the recent bond issue for sewers to the total amount of $143,080. The largest is to drain the annexed territory west of the Boulevard. It will run in Shepherd St. from the present head of Bacon's Quarter Branch to Park Ave., thence to West St., Cary St. and in Cary St. from the Boulevard to the new corporation line. Estimated cost of this sewer, $107,220.

ROCK HILL, S. C.—See item under Light and Power Plants.

EAST LAKE (Atlanta post-office), GA.—The city has had plans prepared by the Solomon-Norcross Co., 1622 Candler Bldg., Atlanta, for a sewer system equipped with disposal plant. Estimated cost, $10,000. Bids will soon be asked. The plant will consist of sanitary sewers and sewage-disposal plant, with sedimentation tank and sprinkling filters.

GREENWOOD, MISS.—The City Council has decided upon a plan of drainage and has instructed R. C. Huston, Engr., to prepare plans and specifications. Bond issue for $30,000 has been voted.

MIDDLETOWN, OHIO.—The citizens on Feb. 16 voted to issue $100,000 of bonds for the construction of a trunk sewer, and the enlargement of the sewage plant.

CANTON, OHIO.—Phil H. Webber, City Engr., has estimated the cost of rebuilding the sewage disposal plant at $120,000. The plans call for the construction of a number of septic tanks, through which the water from the sewer discharge pipes will percolate, leaving the solids settle to the bottom.

LAPORTE, IND.—The City Council has decided to construct a sewerage system. Estimated cost, $300,000. R. L. Sackett, Purdue University, is Consulting Engr.

CANTON, ILL.—Bids will probably be received about April 1 for the construction of the sewer system from the plans of A. T. Maltby, 803 Great Northern Bldg., Chicago. Estimated cost, $50,000.

BUSHNELL, ILL.—The City Council has completed arrangements for a large sewerage system. Surveys have been made for the project and specifications have been adopted. One acre tracts have been purchased on both east and west sides of the city for outlets at which purification tanks will be established. Estimated cost, $42,000.

MILWAUKEE, WIS.—Bids are asked until 10.30 a. m., March 11, by the Board of Public Works, for furnishing material and labor for constructing house drains and water service connections in North Fourth St., from Keefe Ave. to Concordia Ave., in the 21st Ward. Charles J. Poetsch is Chn. Bd.

DES MOINES, IOWA.—J. L. HANSMAN has secured contract for sewers in Fourth St., between Locust and Walnut Sts., at 94.4 cts. per lin. ft. and on East Third St., at $1.09 and O. P. HERRICK, 107 Locust St., for sewers in East Twelfth and 13th Sts., at $2.24 per lin. ft.

SIOUX CITY, IOWA.—The lowest bid opened on Feb. 22 for constructing sewers in Plymouth and other streets in Cole's and Chase's Additions was that of L. Christenson & Co., of Sioux City, at $10,851. G. Y. Skeels is City Engr.

ERIE, KAN.—Contract for constructing the sewer system has been awarded to W. W. COOK & SON, Junction City, at $26,700. Bids were opened on Feb. 17. Burns & McDonnell, Scarritt Bldg., Kansas City, Mo., are Engrs.

MANHATTAN, KAN.—The city proposes to construct a sewer system. Estimated cost, $80,000. H. W. Hungerford is City Clk.

HAVELOCK, NEB.—The citizens on Feb. 15 voted to issue $26,000 of bonds for the construction of sewers from the plans of Grant & Letton, F. & M. Bldg., Lincoln.

SIOUX FALLS, S. DAK.—Bids will be received about April 1 for the construction of brick, concrete, stone or pipe sewers. Estimated cost, $150,000. J. W. Johnston is City Engr.

ST. LOUIS, MO.—New bids will not be asked for the proposed sewer in North Harlem Creek joint sewer district for about a month or two. It will be about 2¼ miles in length, 1½ miles to be of concrete and ¾ of a mile of brick. Estimated cost, $246,120. Bids for this work were rejected by the Board of Public Improvements on Feb. 11. Noted on March 3. W. B. Dryden is Secy. Bd.

SPRINGFIELD, MO.—H. G. Horton, City Engr., is preparing plans and specifications for four sewer districts.

SEARCY, ARK.—The Sewer and Water Commissioners have received the report of engineer employed by city to prepare estimate, plans and specifications for sewer system.

SAN ANTONIO, TEX.—The city awarded contract on Feb. 21 at $23,551 to REESE & PETERS of San Antonio for constructing sewer system in districts Nos. 12 and 13.

OKLAHOMA CITY, OKLA.—F. H. Lancashire of Dallas, Tex., has been retained by the city to design sewage purification works for the North District sewer outlet. Approximate cost, $25,000. W. C. Burke is City Engr.

Plans and specifications have been prepared for five new sanitary sewer districts, to include Winans Addition and Jefferson Park Addition. Estimated cost, $100,000.

Bids will be received until March 14 for the construction of lateral sewers in Gee & Weesner's suburb, West View Heights. Bob Parman is City Clk.

ARDMORE, OKLA.—The city has awarded contract at $21,910 to P. J. MEREDITH CO., Terre Haute, Ind., for constructing septic tanks in connection with the construction of the proposed sanitary sewer system.

ENID, OKLA.—The city has voted $15,000 of bonds for the extension of sanitary sewer and $10,000 for extension of storm sewer. Walter H. McKenzie is Mayor.

LODI, CAL.—Bids will be received by the city until March 14 for the construction of a sewer system from the plans of H. H. Henderson, of Stockton.

SACRAMENTO, CAL.—Bids were opened on Feb. 14 by M. J. Desmond, City Clk., for furnishing and installing at the sewage pumping station an additional pumping unit. Contract has been awarded to CHARLES C. MODRE & CO., San Francisco, at $19,070.

ALAMEDA, CAL.—The citizens on Feb. 19 voted to issue $180,000 of bonds for schools and a sewer on the South Side. I N. Chapman is City Engr.

MALFIELD, CAL.—The Town Trustees on Feb. 23 rescinded the contract awarded to J. Birkett & Sonnicken at $24,463 on Feb. 21, and rejected all bids. New bids will be asked. The four lowest bids were: William Healty, Oakland, $22,890; Dubrow & White, San Francisco, $23,002; C. D. Vincent, Oakland, $24,334; Sonnicksen & Birkett, Palo Alto and Mayfield, $24,463.

LOS ANGELES, CAL.—The Board of Public Works has awarded contract to R. N. NIKCEVICH, of Los Angeles, for constructing the Santa Fe Ave. main sewer, 16-in. vitrified pipe sewer, Y branches, manholes, junction chambers, at 89 cts. per lin. ft. for sewer pipe, $1.87 for 6-in. Y branches, $63 each for manholes with junction chambers.

GOODING, IDAHO.—We are officially advised that Louis C. Kelsy, Salt Lake City, Utah, has been retained by the town to design a sewerage system. Estimated cost, $50,000.

IDAHO FALLS, IDAHO.—See item under Light and Power Plants.

HAMILTON, ONT.—The City Engineer has completed plans for sewers for the East End annex to cost $160,000. Sewers required at once will cost about $110,000.

Contract for outfall sewer, in connection with sewage disposal works, has been awarded to F. H. DICKINSON, of Hamilton, at $125,504.

CALGARY, ALTA.—The City Engineer's Department is preparing plans and estimating the cost for the tunnel at Elbow River, which will be required this year to lay the sewer extension along the portion of Ninth Ave., east of the river, which is still without sewer accommodations. The tunnel will be bored at a depth of 20 ft., and the sewer pipe will be carried under the Canadian Pacific Ry. right-of-way.

GARBAGE DISPOSAL.

(* *denotes that this work is advertised in Engineering News.*)

•WASHINGTON, D. C.—Bids are asked by the Commissioners of the District of Columbia, Washington, until 2 p. m., March 23, for the collection and disposal of ashes, garbage, dead animals, night soil, and miscellaneous refuse in the District of Columbia, and for the removal of ashes and refuse from buildings under the control of the Commissioners, for periods of one, three and five years. Specifications, blank forms of proposal, and all necessary information may be obtained at the office of the Superintendent of Street Cleaning, Room 329, District Bldg.

•FORT SHERIDAN, ILL.—Bids are asked by Capt. M. E. Saville, Constructing Q. M., U. S. A., until noon, March 30, for the construction of a crematory building and garbage crematory at Fort Sheridan.

PORTLAND, ORE.—The Mayor on Feb. 24 signed the ordinance passed by the City Council on Feb. 23, appropriating $100,000 for the construction of a garbage crematory at Gould's Lake.

STREETS AND ROADS.

(* *denotes that this work is advertised in Engineering News.*)

HARTFORD, CONN.—Plans for proposed state road work have been received in the office of the State Hoghway Commissioner, as follows: From A. B. Alderson, Engr., 9,000 lin. ft. on the Hartford-Winsted turnpike in the town of New Hartford; from S. H. MacKenzie, Engr., two sections, aggregating 11,300 lin. ft. in the town of Prospect; from J. Frederick Jackson, Engr., three sections in the town of Southbury—16,000 lin. ft. on the Southford-Southbury Center road, 11,400 lin. ft. on the road from Southbury Center to the Woodbury line and 19,315 lin. ft. on the Newton road.

NEW YORK, N. Y.—Bids are asked by the President of the Boro of Manhattan, until 11 a. m., March 14, for repairing asphalt block pavements in the Borough of Manhattan, together with the work incidental thereto; also (1) for maintaining the asphalt pavement on Fourth Ave., from Eighth St. to 24th St., Boro. of Manhattan, where the original contract has been abandoned; (2) for maintaining the asphalt pagevent on Long Acre Square, from the north curb line of 42d St., on Broadway and Seventh Ave., then north to the north curb line of 47th St., on Broadway and Seventh Ave., together with various other streets, Boro of Manhattan, where the original contract has been abandoned.

Bids are asked by the Park Board until 3 p. m., March 17, for furnishing and delivering 10,000 cu. yds. of sandy loam for the Harlem River Driveway, Boro of Manhattan; also (1) for furnishing and delivering 7,000 cu. yds. of clay loam where required on parks in the Boro of Manhattan; (2) for furnishing and delivering 3,000 cu. yds. of organic mould or humus where required on parks in the Boro of Manhattan.

•MATTEAWAN, N. Y.—Bids are asked until 2 p. m., March 18, by B. I. D. Roosa, Village Clerk, for about 16,500 sq. yds. of vitrified block paving, on Main and Fountain Sts.

•EAST ORANGE, N. J.—Bids are invited by the City Council of East Orange for resurfacing about one mile of roadway in East Orange; also for furnishing and delivering to the City 100,000 gallons, more or less, of Grade A and Grade X Trava road surfacing materials.

ELIZABETH, N. J.—Bids will be received until March 15 by the City Council for paving Florida St., requiring 6,340 sq. yds. of brick pavement on a 6-in. concrete foundation, etc. N. K. Thompson is Street Comr.

PATERSON, N. J.—Bids will be received until March 23 by the Board of Chosen Freeholders at Paterson for constructing a storm water drain on Main St., Acquackanonk Township, and for grading and laying compound pavement on Main St., Paterson. William H. Mason is Chn. Road Com.

TOMS RIVER, N. J.—CHARLES W. NATHIS, of Tuckerton, N. J., has been awarded the contract by the Ocean County Board of Freeholders, at $37,602, for constructing a section of Ocean •Boulevard, south from Chadwick to Sea Side Park, about 5 1-3 miles.

ERIE, PA.—Bids are asked by Joseph W. Hunter, State Highway Comr., Harrisburg, Pa., until 2 p. m., March 24, for the construction of 10,557 ft. of road, extending from the west line of Albion Borough to the Cross Roads at Lee Knapp's and from the east line of Albion Borough to the [illegible] Crook Township line, a distance of about 10,557 lin. ft., 14 and 16 ft. wide, in Conneaut Township, in the County of Erie.

•FORT DU PONT (Delaware City Post-office), DEL.—Bids are asked by the Constructing Q. M., until 11 a. m., April 4, for construction of 1,934 sq. yds. of macadam roads and 3,777 sq. ft. of granolithic sidewalks at Fort Du Pont, Del.

TANEYTOWN, MD.—The contract for constructing one mile of macadamized roadway, under the Schumaker Road Law, has been awarded to WALSH BROS. for $14,670. The road will start at corporate limits on the Uniontown Road and will reach beyond Hyde's Hill.

BALTIMORE, MD.—Bids will be received by the State Roads Commission, Union Trust Bldg., until noon, March 24, for building twelve sections of State highway, aggregating 250.56 miles. John M. Tucker is Chn.

NORFOLK, VA.—The Board of Control has decided, upon the recommendation of W. T. Brooke, City Engr., to pave Granby St., from Main to Queen St., with wood block, and awarded contract to the U. S. WOOD PRESERVING CO., of New York at $46,715. Upon an examination of the bids it was found that the U. S. Wood Preserving Co. was the only one of the three bidders which bid according to the specifications. The other two bidders on wood block having bid according to their own specifications. The three bids were as follows: U. S. Wood Preserving Co. (4-in. block), $46,715; Barbour & Co. (4-in. block), $47,342; Richard & Co. (size not named), $44,269.

LAKE CHARLES, LA.—The City Council has instructed the City Engineer to prepare plans and specifications for constructing about five miles of sidewalks.

LEXINGTON, KY.—John Sakin, Mayor, has signed the contract with CAREY & REED, of Philadelphia, for the reconstruction of South Ashland Ave., from Main St. to High St., with asphalt. The contractors will begin work just as soon as the weather will permit. This will be the first street in Lexington to be paved with asphalt. The price per square yard for the work will be $2.15.

COLUMBUS, OHIO.—Bids will be received at the office of the Franklin County Commissioners until March 30, for the grading and macadamizing of the James T. Lazell Joint County Road on the line between Franklin and Delaware counties. The specifications call for 1,800 cu. yards excavation, 1,850 tons of crushed stone, 420 tons of crushed limestone screenings, 10,000 gallons of asphaltic oil and a quantity of c. i. pipe.

WADSWORTH, OHIO.—We are officially advised that bids were received on Feb. 28 by the Village Council for street improvement. The contract for curbing and paving College St. has been awarded to the OHIO ENGINEERING CO., of Elyria, Ohio. The contract for South Main St. has been let to GEORGE HERRING & SON, Mansfield, Ohio. Estimated cost, $30,000.

CLEVELAND, OHIO.—Bids will be received at the office of the Board of Commissioners of Cuyahoga County, Ohio, until 11 a. m., March 30, for the improvement of Depot Road by grading, draining, improving the same from Wooster Pike at Strongsville Center to Prospect Road at Vigil in Strongsville Township in accordance with the form of contract and specifications to be furnished by Frank R. Lander, County Surv., Cleveland. John F. Goldenbogen is Clerk.

CINCINNATI, OHIO.—Bids are asked until noon, April 1, by the Commissioners of Hamilton County, Cincinnati, for improvement of Eighteen Mile Road, near the residence of G. W. Radcliffe, in Harrison and Crosby Townships. Specification 968. Also for improvement of part of Taylor's Creek Road, near Ben Beerman's place, in Miami Township. Specification 992. Fred Dreihs is Clerk.

FORT WAYNE, IND.—We are officially advised that bids were received by the Commissioners of Allen County until 9, on March 2, for the construction of a macadamized road in Madison Township. George W. Lindemuth is County Audr. The bids were above the estimate and were rejected.

HANCOCK, MICH.—The City Council has authorized the paving of Hancock Ave., at a cost of $25,000.

BENTON, ILL., About $60,000 will be expended for paving work. A. S. Cleveland is Chn. Local Improvement Com.

STEGER, ILL.—Bids will be received about April 1 for about 8 miles of sidewalk. J. R. Wachs is City Clerk.

HUNTLEY, ILL.—Hugh M. Price, 1207 Hartford Bldg., Chicago, has been selected to prepare plans and specifications for brick pavement in Huntley. Cost, about $25,000.

OCONOMOWOC, WIS.—The Common Council has awarded the contract for paving with brick and creosoted blocks portions of Collins, Main and Milwaukee Sts. to E. L. BARTLETT, of Watertown, Wis., for $9,514.

AMES, IOWA.—Bids will be received until March 15 for about 24,000 sq. yds. of 3-in. creosoted wood block paving, treated with 16 lbs. of creosote oil per cu. ft., laid on 1-in. sand cushion and 4-in. concrete base. A. B. Maxwell, City Clerk; J. Q. Wickham is City Engr.

IOWA CITY, IOWA.—Bids are asked until 2 p. m., March 18, by O. J. Slater, City Clerk, for street improvement. The following is an approximate estimate of the work to be done: 2,300 cu. yds. of grading; 660 lin. ft. of curbing; 5,500 sq. yds. of paving.

BURLINGTON, IOWA.—We are officially advised that bids were received on Feb. 21 by Robert Krappach, City Clerk, to grade, curb with artificial stone and pave with mineral rubber asphaltic concrete Arch St., from the west side of Fifth St. to the east side of Sixth St., and from the west side of Sixth St. to the east side of Eighth St., and from the west side of Eighth St. to the west side of Central Ave., 40 ft. wide between curbs and Central Ave. from the south side of Arch St. to the north side of High St., 32 ft. wide between curbs, including all necessary intersections, said improvements to be on a 5-in. concrete foundation. The contract has been let to the BURLINGTON CONSTRUCTION CO., at $1.82 per sq. yd., for mineral rubber asphaltic concrete. J. F. Winters is City Engr.

SOUTH ST. PAUL, MINN.—This city has joined the Board of Commissioners of Ramsey County for improving and macadamizing Concord St. Bids will soon be received by J. J. O'Brien, City Clerk. Cost, $10,000.

ST. PAUL, MINN.—The Board of Public Works, P. Van Hoven, Pres., has approved the plan of L. W. Rundlett, City Engr., for grading Winona St., between Smith Ave. and Charlton St., to cost $3,350. The board has awarded the contract for curbing and leveling Isabel St. to O'NEIL & PRESTON, city, at $1,174, and the contract for the same work on Laurel Ave., between Snelling St. and Aldine St., to DICKSON & KOLBERG, city, at $1,824.

WICHITA, KAN.—Following is a list of streets which it is the intention of the City Council to pave, according to the Wichita "Beacon": Thirteenth St., from Market to Hillside, 35 blocks, or more than two miles, brick, estimated cost, $90,000; Maple St., from Campbell Ave. to Hiram Ave., twelve blocks; asphalt, to cost $36,855; Seneca St., from Douglas to Central, four blocks, asphalt, to cost $29,711; Water St., from William to southern city limits, 18½ blocks, asphalt, to cost $94,862; Waco Ave., from Second to Thirteenth, eleven blocks, asphalt, to cost $62,481; Lawrence Ave., from 14th to 21st, seven blocks, brick, $35,000; St. Francis, Ninth to 14th, five blocks, bitulithic, to cost $33,503; Tremont St., from William to Orme, 5½ blocks, brick, to cost $23,914; Hillside Ave., Douglas to Ninth, nine blocks, bitulithic, $46,657; Rutan Ave., Cedar to Central, six blocks, bitulithic, to cost $29,619; Clifton Ave., Kellog to First, six blocks, asphalt, to cost $11,312; Roosevelt Ave., Douglas to Central, four blocks, brick, to cost $20,000; Circle Drive, one block, brick, to cost $5,000; Pattie Ave., Douglas to Henry, 12 blocks, asphalt, to cost $48,000; Market St., from English to Orme, five blocks, asphalt, to cost $19,832; Main St., Lewis to Bayley, eight blocks, asphalt, to cost $35,043; Market St., from Twelfth to Thirteenth, one block, asphalt, to cose $6,638; Murdock Ave., from Wichita to Waco and from Lawrence to Emporia, three blocks, asphalt, to cost $12,988; Topeka Ave., from English to Lincoln, nine blocks, bitulithic, to cost $45,000; Seneca St., from University to McCormick, four blocks, asphalt, to cost $16,000; Park Place, 13th to 17th, asphalt, four blocks, to cost $24,000; Douglas Ave., Bluff to eastern city limits, five blocks, brick, to cost $25,000; Topeka Ave., 13th to 14th, one block, asphalt, to cost $6,706; Douglas Ave., Seneca to Exposition, two blocks, bitulithic, to cost $7,851; Douglas Ave., Exposition to Sheridan, 16 blocks, brick, to cost $85,969; Washington, five blocks south of Douglas, brick, to cost $24,832; North Washington, Douglas to Second, two blocks, brick, to cost $11,562; First St., Market to Main, one block, creosote wood blocks, to cost $3,723; catch basins and other necessary expenses connected with some of this paving, $2,825; thirty-six blocks of cross streets to be paved with brick and asphalt, $126,000. These cross streets are, Ninth, Tenth, Eleventh, Twelfth, Thirteenth, Fourteenth, Elm, Central, Third, Second, English, Waterman, and Lewis. These figures are based on the estimate of Bert C. Wells, City Engr., and the aggregate cost of the paving on all these streets is $1,026,651.

ST. JOSEPH, MO.—The Board of Public Works has adopted ordinances providing for the paving of portions of Fillmore, Moss Sts. and Doniphan Ave.

WACO, TEX.—The City Board of Commissioners has awarded contracts to OCKANDER BROS. for laying 15 blocks of vitrified brick pavement at $1.72 per sq. yd. for brick laid flat with bituminous filler to deaden sound, and $2.05 for brick laid edgewise with cement filler. Total cost, about $50,000.

OKLAHOMA CITY, OKLA.—A contract for grading twelve miles of the total 27 of the proposed Park Boulevard has been let to T. R. DAVIS, low bidder, for $6,100. The work, first of actual construction on the road, which ultimately will result in the circling of Oklahoma City with a driveway 200 ft. wide, will make passable the twelve miles to be completed by the contract. The time estimated is three months. The contract calls for all grading and leveling and all curbs two feet and under in depth. After the grading is completed some sort of paving surface will be applied. W. C. Burke is City Engr.

DUSTIN, OKLA.—Bids are asked at the office of F. P. Hicks, Town Clerk, Dustin, until 7 p. m., March 17, for the construction of sidewalks along certain streets in the town.

OLYMPIA, WASH.—Bids will be received until March 16 by H. L. Bowley, State Highway Comr., Olympia, for improving the following State aid roads: Yakima City Road, No. 59, Kitsap County, and Sunnyside-Mabton Road, No. 60, Yakima County; macadamizing only Euclid Road, Beton County; Territorial road, Whitman County; Asotin Creek Road, Asotin County; Spangle South Bend, Foraker Road, Regal Road and Regal Road extension, Spokane County; also until March 23 same place as above, Mitchel State Aid Road, Kitsap County; East Trunk Road, King County; Cowlitz-Olympia Road, Lewis County; State Road, No. 15, Cowlitz County.

SEATTLE, WASH.—Bids were opened by the Board of Public Works on Feb. 23 for the following paving, awarding the contracts for which being postponed for a few days:

Alley between Front and Main Ave., Bernard to Browne St., and from Front to Main Ave., between Bernard and Browne Sts.; estimated cost $4,650; Independent Asphalt Paving Co., Bailey Bldg., $4,100; Barber Asphalt Co., Mutual Life Bldg., $4,539.

Broadway, Monroe to Chestnut St., asphalt; estimated cost, $58,899; Western Asphalt Paving Co., $55,000; Independent Asphalt Paving Co., $56,900; Barber Asphalt Paving Co., $55,984.

Fifth Ave., Perry to Arthur St.; estimated cost, $13,200; Independent Asphalt Paving Co., $11,800; Barber Asphalt Paving Co., $13,220.

Third Ave., Division to Hilliard St.; estimated cost, $14,400; Western Asphalt Paving Co., $13,377; Barber Asphalt Paving Co., $14,359; Independent Asphalt Paving Co., $14,800.

Pave, grade, curb and park, oileroid, Tenth Ave., Helena to Ivory St.; estimated cost, $6,600; H. L. Lilienthal, $7,800.

SAN DIEGO, CAL.—The City Council has decided to repave H St., from Sixth to 16th Sts. The estimate of the City Eng. is for asphalt paving, between intersections, $21,529; paving 51,185 ft. at intersections, $10,237; culverts, $1,600; engineering, $330; total, $33,696.

LOS ANGELES, CAL.—The contract for improving Banning St. has been awarded by the Board of Public Works to the BARBER ASPHALT PAVING CO., Henne Bldg., Los Angeles, on its bid, 17.1c. per sq. ft. for asphalt paving.

SALT LAKE CITY, UTAH.—Bids are asked by H. G. McMillan, Chn., Bd. of Public Works, until 7.30 p. m., March 18, for the work of grading, curbing and paving Third South St., from Third West St. to Rio Grande St., and Rio Grande St. from Second South to Fourth South St., Paving Extension No. 42. George A. McGonagle is City Engr.

OTTAWA, ONT.—The Council of Carleton County is to issue $20,000 of bonds for work upon good roads. R. W. and S. W. Farley have been appointed joint engineers in charge of the work.

MANUFACTURING PLANTS.

(** denotes that this work is advertised in Engineering News.*)

BRIGHTWOOD (Springfield post-office), MASS.—Factories for the manufacture of Bosch magnetos, will be built in Brightwood. The Bosch Magneto Co., 223 West 46th St., New York, has agreed to buy about seven acres of land between the Boston & Maine tracks and North Main St., when suitable arrangements are made. The first factory building will be started as soon as the frost is out of the ground. This building will employ 700 men when it is working at its capacity. Each of the buildings will be 385 ft. long by 66 ft. wide of reinforced concrete, and will cost about $125,000. The machinery and tools with which each building will be equipped will cost between $75,000 and $100,000. The second and third factories which are planned will not be built immediately, but are to be put up when the first building is under full headway. The plant will employ eventually over 2,000 skilled mechanics.

FALL RIVER, MASS.—The contract for the addition to the No. 2 Stafford Mill has been awarded to BEATTIE & CORNELL. The present 2-story ell is to be extended 50 ft. and raised to five stories, giving room for 15,000 additional spindles. The contract for the engine for the No. 2 Mill has been placed with the WILLIAM A. HARRIS STEAM ENGINE CO., of Providence, R. I., and the engine is being constructed.

WATERBURY, CONN.—The Waterbury Clock Co., Waterbury, Conn., will erect an addition to one of its factory buildings, 43 × 152 ft., five stories.

SYRACUSE, N. Y.—The Brown, Lipe, Chapin Co., 200 South Geddes St., has let contract for construction of its new plant at West Fayette and Seneca Sts., to the KAHN TRUSSED CONCRETE STEEL CO., Detroit, Mich. The plant will comprise a 6-story and basement main building with a 233-ft. frontage and separate buildings for moulding and tempering departments and power and heating plant. The plant will be of reinforced concrete and steel construction. Cost $250,000.

NEW YORK, N. Y.—We are officially advised that the TURNER CONSTRUCTION CO., 11 Broadway, has been awarded the general contract for a 6-story and basement reinforced concrete factory building to be built for the Gretsch Corporation at 104-114 South Fourth St., Brooklyn. The building will be 83 × 120 ft. in plan and will be constructed of concrete throughout. Benjamin Finkensieper is Arch., 134 Broadway, Brooklyn. Work will be started at once.

The F. & M. Schaefer Brewing Co. will erect a building for its bottling business at the northeast corner of Park Ave. and 50th St., being part of the plot owned and occupied by the company. It will extend 65 ft. on Park Ave. and 75 ft. on 50th St., and will be of symmetrical proportions and plain and massive in its architectural treatment. The proposed building will be of fireproof construction, with an interior finish of tile brick and concrete. The spiral conveying system will be used throughout the building, thus doing away with platform elevators. Capacity, 100,000 bottles a day.

NIAGARA FALLS, N. Y.—The TURNER CONSTRUCTION CO., 11 Broadway, New York, has been awarded a general contract for reinforced concrete factory, 200 × 132 ft., one and two stories high for the Aluminum Co. of America, Niagara Falls, N. Y. The building will have a saw-tooth roof. Private plans were used. Work will be started at once.

BUFFALO, N. Y.—The New York State Steel Co. will add to its plant, at Abbott Road and the Dalaware, Lackawanna & Western R. R., a 65-ton open-hearth furnace with necessary buildings and equipment, requiring about 500 tons of structural steel. The Garrett-Cromwell Engineering Co. will soon receive bids for the construction work.

A 10-story power building, 30 × 150 ft., of brick and steel construction, is to be built at the corner of Ellicott and North Division Sts., by John W. Gibbs & Co., D. S. Morgan Bldg. The structure is to be used for light manufacturing purposes. Plans are under preparation.

John H. Coxhead, 928 Ellicott Sq. Bldg., has completed plans for the foundry building, 147 × 260 ft., one and two stories, to be erected by the Acme Steel & Malleable Iron Works, Chandler St. and the New York Central R. R. The foundry will be of brick and structural steel.

BALDWINSVILLE, N. Y.—The Kenyon Paper Co. at Baldwinsville, has made plans to double the capacity of its mill, which will call for the expenditure of $75,000 in the next three months. A new brick and steel building 75 × 200 ft. is to be erected and will adjoin the present structure. The new building will be used for finishing the product of the mill and for storage purposes. Machinery will be installed early in April and a 200-HP. Corliss engine, together with a new 150-HP. boiler will be placed. Richard S. Hoffman is Treas.

JERSEY CITY, N. J.—We are officially advised that the United Wireless Telegraph Co., 42 Broadway, New York, is to erect a reinforced concrete factory building, 200 × 40 ft., with two stories and a basement, on Florence and Warwick Sts., Jersey City. The company has retained Frederick A. Waldron, 37 Wall St., New York, as Arch. and Engr.

NEWARK, N. J.—We are officially informed that the TURNER CONSTRUCTION CO., 11 Broadway, New York, N. Y., has been awarded the general contract for a 5-story reinforced concrete factory for the manufacture of gummed paper to be erected at Waverly, N. J., for Samuel Jones & Co., of London, England. The main building will be 130 × 36 ft., with a wing 34 × 60 ft. Howes & Morse, 19 West 38th St., New York, are Archs. Work will be started at once.

KENNERDELL, PA.—The McKEESPORT CONSTRUCTION CO., will commence the erection of a steel building soon for the Pittsburg Plate Glass Co. at Kennerdell, Pa., which will require 270 tons of steel, and which was fabricated by the PITTSBURG BRIDGE & IRON WORKS, Rochester, Pa.

CHAMBERSBURG, PA.—The T. B. Woods' Sons Co., Chambersburg, Pa., will enlarge its plant by the addition of a foundry and machine shop, 100 × 500 ft.; a pattern shop, 40 × 130 ft.; a 2-story shipping and storage house, 60 × 130 ft., and an office building, 60 × 60 ft.

ALLENTOWN, PA.—The Lehigh Traction Co. of Hazelton, Pa., expects to build a car house at 13th and Gordon Sts., Allentown. It is planned also to erect a paint shop 80 × 100 ft. adjoining the office building in Allentown, to be two stories high.

SHAMOKIN, PA.—The Shamokin & Mount Carmel Transit Co., Shamokin, intends to build, as soon as the weather permits, an additional car house 200 x 48 ft. It will be a steel structure with corrugated iron roof and sides. Monroe H. Kulp, Shamokin,

BALTIMORE, MD.—The Crown Cork & Seal Co. has been granted a permit to build a foundry, 218 × 13 ft., at Guilford Ave. Cost, about $100,000.

LUMBERTON, N. C.—The Jennings Cotton Mills Co. of Lumberton, N. C., has elected officers as follows: Pres. and Treas., H. B. Jennings; Vice-Pres., A. E. White; Secy. and Asst. Treas., F. P. Bray; all of Lumberton. It has been decided to build a cotton yarn mill at a cost of approximately $275,000, and the details will be determined soon.

NEWELL, N. C.—A. S. Hutchinson, of Charlotte, N. C., is promoting a plan for the erection of a cotton factory at Newell, N. C. He contemplates arranging for the erection of a mill equipped with from 10,000 to 15,000 spindles, and probably looms to match. The plan includes using as power electricity transmitted from the lines of the Southern Power Co. of Charlotte, N. C.

BURLINGTON, N. C.—The Keystone Finishing Mills, of Burlington, will proceed at once with the construction of the plant detailed several weeks ago. The company has perfected all arrangements for the necessary capital, the authorized amount of the stock being $125,000. It has plans and specifications for the erection of a building 120 × 60 ft., in which will be installed an equipment of machinery for a daily output of 3,000 dozen pairs of finished hose and 3,000 paper boxes in which hosiery will be packed. It is stated that the company will also make the cases for shipping and do all its own printing. The principal organizer is John H. Tate of High Point, N. C.

COLUMBUS, GA.—The Morris Small Co., composed of Macon people, has awarded to the BUTTS LUMBER CO. a contract to erect a $50,000 sewer pipe plant, 60 × 400 ft., here.

HUNTSVILLE, ALA.—The Lowe Mfg. Co., of Huntsville, Ala., has awarded contract to T. C. THOMPSON & BROS., of Birmingham, Ala., and Charlotte, N. C., for the erection of its addition for weaving. This addition will be 100 × 80 ft., and is to be equipped with 300 looms for weaving cloth. About $80,000 will be the cost of the new building and its mechanical equipment. With this installation the company will have about 27,000 spindles and 500 looms. The output is yarns and madras shirtings. Arthur H. Lowe, of Fitchburg, Mass., is Treas., of the company.

STEUBENVILLE, OHIO.—The KEYSTONE FURNACE CONSTRUCTION CO., Fulton Bldg., Pittsburg, has secured a contract from the La Belle Iron Works, Steubenville, Ohio, for equipping all its open hearth furnaces.

BLUFFTON, IND.—Studebaker & Son will receive bids for the erection of elevators at Linn Grove, Vera Cruz and McGrawsville, Ind.

WASHINGTON, IND.—The Baltimore & Ohio Southwestern R. R. Co. has under consideration an addition to its shops at Washington, Ind., to cost between $50,000 and $60,000.

WARSAW, IND.—The Vanwert Packing Co. will soon ask for bids for remodeling a factory building.

FRANKFORT, IND.—The Directors of the Toledo, St. Louis & Western Ry. Co., according to the Toledo "Blade," have appropriated $250,000 to be expended in this city for the purpose of building new shops and repairing the present buildings and equipping both with modern machinery. A roundhouse, machine shop and a coach shop will be erected, and the company expects to employ 350 men in the coach department alone. The machine shop will be fitted with machinery so that the company can do all of the repair work for this system, the Chicago & Alton and other roads owned by the Hawley syndicate at this point. The company, a few months ago, purchased a tract of 20 acres of land lying just west of the site of the present shops and the new buildings will be built upon this land. Theodore Shonts, Pres., acting with the authority of the Board of Directors, has signed a contract with the city to motorize the shops, the city to furnish the power, and in the future the company will use electricity to run the machinery. The conract calls for 500-HP., whereas at the present time the company has but 225-HP. The change of motors must, according to the contract, be made on or before July 1. The company is employing about 400 men here at present, but when the new shops are erected and the machinery installed it contemplates employing from 800 to 1,000.

INDIANAPOLIS, IND.—The Overland Automobile Co. has ordered plans, on which to ask for bids, for the erection of an automobile factory on corner of 15th and Railroad Sts. Will. H. Brown is Vice-Pres.

INDIANAPOLIS, IND.—The Parry Auto Co. has ordered plans on which to ask for bids for the construction of an addition to the present plant.

SUMMITVILLE, IND.—The Chase-Gordon Elevator Co. will ask for bids soon for the erection of an elevator on the site of the elevator recently destroyed by fire.

DETROIT, MICH.—The Michigan Motor Car Co., of Detroit, Mich., has purchased a manufacturing site and is having plans prepared for an extensive plant which it will erect this spring. H. M. Thomas, 353 Bagg St., is at the head of the enterprise.

The Hudson Motor Car Co., Detroit, Mich., has secured a site of 106 acres in the old Fairview district at a cost of $140,000, and intends erecting at once a $400,000 plant to manufacture automobiles. The buildings will be of reinforced concrete construction. Roy B. Chapin is Pres. of the company. It is probable that a large factory for the Gray Motor Co. will be constructed on part of the same site soon.

BAY CITY, MICH.—Plans are being considered by the World's Star Knitting Co. for the erection of a mill, which will double the output of its plant. A power unit will be installed in the building, consisting of a 125-HP. engine and a generator. The machinery will be driven by individual motors. A ventilating system, regulated by electricity, will be installed also.

MOUNT CLEMENS, MICH.—T. Van Damme, Arch., Mt. Clemens, Mich., is preparing plans and specifications for a factory building for the Mt. Clemens Auto Car Co., of Mt. Clemens.

PEORIA, ILL.—The contract for structural steel required for constructing the plant of the Avery Co. has been let to the PAN-AMERICAN BRIDGE CO., of New Castle, Ind. As officially stated on Dec. 30, 1909, "the main building will be 700 × 93 ft., extending on Adams St. in the village of Averyville from Woodlawn Ave. to within 50 ft. of the Mackemer Lumber Co.'s office. Connected with the main building will be a wing 160 ft. in length extending to the Rock Island tracks. The shops will be built of steel, brick or concrete, and will be of fireproof construction. The structure will have a central bay 700 × 40 ft., and two side bays 24 ft. wide with a gallery over each side bay. The central bay will be 39 ft. high. The crane rails to be 32 ft. above the floor. A wing, 150 × 80 ft., will be connected to the main building. This addition will be a stock room, with a railway switch to run through the lower end. The central bay to have runways for two electric cranes, one 20-ton with a 5-ton auxiliary hoist, and one 10-ton hoist. The stock room wing to have a 20-ton crane. The central bay will be for engine erecting and heavy machine tools. One side bay and gallery will be the machine, fitting and metal shops, the other bay will be engine erecting and wheel shops and the stock room for finished parts in the gallery. The erecting bay is to be equipped with 15 hand cranes, a crane for each erecting floor. The company expects to have shops completed, ready to install tools by May 1, 1910." Cost, $200,000.

CHICAGO, ILL.—The Continental Bolt & Iron Works, Chicago, will build a plant at 43d St., near Oakley Ave. The new plant will be of brick and steel construction, with concrete foundations. The plant will be equipped with facilities for making all articles connected with a general bolt and nut business, and the company will be in the market for equipment soon. The present plant is at 22d and Union Sts.

NORTH CHICAGO, ILL.—Bids are asked by R. F. Nicholson, Ch. of Bureau of Navigation, Navy Dept., Washington, D. C., until noon, April 6, for a refrigerating and ice-making plant at the Naval Training Station, Great Lakes, North Chicago, Ill.

BELOIT, WIS.—A 2-story addition, 30 × 80 ft., will be made to the plant of the C. Mattison Machine Works, manufacturer of woodworking lathes and other tools, at Beloit, Wis. Fireproof construction will be followed and a sprinkler system installed.

ATLANTIC, IOWA.—S. G. Hunter, Atlantic, Iowa, has let contract for the erection of an addition, 50 x 90 ft., to the ATLANTIC IRON WORKS, which he controls.

IOWA FALLS, IOWA.—Gade Bros. Mfg. Co., of Iowa Falls, Iowa, whose machine shop was destroyed by fire recently, will rebuild at once. Foundations had been completed last fall for a new concrete shop building, 50 x 300 ft., and this building was to have been erected the coming summer. The plans will be completed and this building will be erected at once. The company saved several other buildings of its plant, in which machinery is being installed temporarily. The company is in the market for a full line of machine tools for the manufacture of gasoline engines, including lathes, drills, milling machines, grinders, etc., as well as small tools and supplies.

SHAKOPEE, MINN.—The Minnesota Stove Works, Shakopee, Minn., will build an addition, 80 × 150 ft., for which considerable equipment is reported to be required.

WICHITA, KAN.—The Kansas City, Mexico & Orient R. R. Co. has awarded a contract to WESTINGHOUSE, CHURCH, KERR & CO., 10 Bridge St., New York, for the erection of shops at Wichita, Kan., which will cost about $400,000, and will employ about 200 men. Ground for the erection of the new shops will be broken immediately. The building to be erected will consist of erecting shop, car shop, planing mill, power house, storehouse, round-house, with necessary accessories.

OMAHA, NEB.—The Omaha & Council Bluffs Street Ry. Co. plans an addition to its car shops in Omaha. The addition will be used for entirely new work and the present shops for repair work.

WOMBLE, ARK.—Walter E. Womble, of this town, is interested in a plan for building a cotton factory at or near Womble. He and his associates are promoting the enterprise and contemplate the development of a water power on the Caddo River to furnish electricity for driving the mill. They hope to effect arrangements during the next 60 days.

TACOMA, WASH.—The Puget Sound Electric Ry. Co. is considering plans for the erection of a car house on Bay St., Tacoma; also passenger stations at Puyallup, Black River and Renton.

OAKLAND, CAL.—The Crane Co., of Chicago, has purchased a lot at Ninth and Webster Sts., Oakland, on which it will soon erect a building.

FRESNO, CAL.—The Atchison, Topeka & Santa Fe Ry. Co. will erect a concrete round-house here, to cost $150,000. W. L. Bradley is Div. Engr., Fresno.

GALT, ONT.—F. W. White, of Toronto, is negotiating with the Town Council for the establishment of a branch of Robinson Bros., Ltd., cork manufacturers, of Halifax, England. The company will expend about $10,000 on buildings.

GODERICH, ONT.—J. H. TROMANHAUSER, of Toronto, has been awarded the contract for the building of the concrete annex for the Goderich Elevator & Transit Co. here. Work will be begun at once, in order to care for the 1910 crop.

WINNIPEG, MAN.—Bids will be received at the office of the Commissioners of the Transcontinental Railway, at Ottawa, Ont., until noon March 15, for the construction and erection complete, on or before July 1, 1910, in accordance with the plans and specifications of the Commissioners, of a pump house in connection with the locomotive shops of the Commissioners east of Winnipeg, Man. P. E. Ryan, Ottawa, Ont., is Secy.

WINNIPEG, MAN.—Bids are asked by Frank Lee, Div. Engr., Winnipeg, until noon, March 14, for construction of an extension to the planing mill at the Canadian Pacific Ry. shops, Winnipeg.

REVELSTOKE, B. C.—The Canadian Pacific Ry. Co. will enlarge its shops here, and 90 additional machinists will be employed.

MISCELLANEOUS CONTRACTS.

U. S. RECLAMATION SERVICE.—All news relative to canal projects, etc., wil be found under Water Supply—Irrigation.

LIGHT-HOUSE.—San Francisco, Cal.—See item under Buildings.

BULKHEAD.—Norfolk, Va.—Bids will be received until March 15 by Board of Control for constructing a bulkhead or retaining wall on both sides of The Hague. W. T. Brooke, City Engr.

ROAD OIL.—New Haven, Conn.—Bids will be received by C. W. Kelly, City Engr., until 2 p. m., March 11, for furnishing a road oil emulsion for street sprinkling.

CAST-IRON MONUMENTS.—Ottawa. Ont.—Bids will be received by W. W. Corry, Dept. of the Interior, until noon, March 15, for the supply of 150 cast-iron monuments for use in marking the international boundary.

DITCHES.—Garner, Iowa.—Bids will be received until March 12 by Thomas Duff, County Audr., for constructing ditches in Drainage Dists. Nos. 3 and 4, to include 35 miles of open ditch and 24½ miles of tile work.

PIER.—Gaspe, Que.—Bids are asked by Napolian Tessier, Secy., Dept. of Public Works, until 5 p. m., March 18, for the construction of a landing pier, with approach, in Gaspe Basin, in the County of Gaspe, Que.

IRON FENCE.—Boston, Mass.—Bids will be received by the Charles River Basin Commission until 2.30 p. m., March 14, for furnishing and erecting about 1,700 lin. ft. galvanized iron fence in the vicinity of the lock in Charles River Dame.

*ASH-HOIST. — Baltimore, Md.—Bids are asked by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., until 3 p. m., April 7, for installation of an ash-hoist in the extension to the U. S. post-office and court-house. Baltimore.

TILE.—Jefferson, Iowa.—Bids will be received until March 16 by E. S. Gose, Audr., Greene County, at Jefferson, for the balance of the tile for Boone County Drain No. 40 and Greene County Drain No. 16. Estimated quantity about 33.432 ft. 6 to 12-in. tile.

DRAINAGE.—Wapello, Iowa.—Bids will be received until March 16 by the Board of Supervisors at the office of H. W. Baker, County Auditor, Wapello, for excavating about 479,000 cu. yds. and clearing 51 acres in Drainage District No. 12, comprising four sections.

DREDGING. — Ashland, Ohio.—Contract will be let by T. Brindle, County Surv., at public outcry on March 18, for the labor of constructing Jerome Fork Improvement, consisting of 11⅝ miles of dredge work, about 315,000 cu. yds.; also for about 1¼ miles of hand work.

TIMBER, SUPPLIES.—Ottawa, Ont.—Bids will be received until 4 p. m., March 17, by the Department of Railways and Canals, Ottawa, for the supply and delivery of timber, hardware, electrical and various other supplies required for use on the Sault Ste. Marie Canal for the year 1910.

DITCH.—New Smyrna, Fla.—Bids will be received until March 17 at the office of Howe & Currier, New Smyrna, for constructing a ditch alongside of Spruce Creek, 6¼ miles in length, containing about 10,000 cu. yds. of earth, mostly sand. D. & C. M Rogers, Daytona.

DITCHES.—Redwood Falls, Minn.—Bids will be received until March 17 by L. P. Larson, Audr., Redwood County, at Redwood Falls, for constructing tile branches to Judicial Ditch No. 1, Redwood and Brown Counties, requiring in all about [illegible] ft. 12, 10 and 8-in. tile. Estimated cost, $4,181.

*BREAKWATER.—Chicago, Ill.—Bids will be received at the office of the Commissioners of Lincoln Park, Clark and Center Sts., Chicago, until noon, March 23, for the construction of approximately 4,000 ft. concrete or stone breakwater, bids to be accompanied by plans and specifications. [illegible] H. West is Secy.

RIPRAP.—Fort Wetherill, R. I.—Bids were received by First Lieut. Frank H. Phipps, Jr., Commissioner Q. M., U. S. A., Fort Adams, R. I., on March 7, for construction of riprap fill, railway and grading of the wharf at Fort Wetherill, R. I. Lowest bidders, Darling & Slade, 56 North Main St., Fall River, Mass. Estimated cost, $[illegible].

SOD.—New York N. Y.—Bids are asked until 3 p. m., March 10, by the Park Board for furnishing and delivering grass sod where required on parks in the Borough of Manhattan.

Bids are asked until 3 p. m., March 17, by the Park Board, for furnishing and delivering grass sods in parks and on parkways in the Boroughs of Brooklyn and Queens.

BROKEN STONE. ETC.—New York, N. Y.—Bids were received on March 8 by the President of the Borough of Richmond for furnishing all the labor and materials required for furnishing and delivering the following: (a) 12,000 tons of broken stone and screenings in District No. 1; (b) 12,000 tons of broken stone and screenings for District No. 2; (c) 12.000 tons of broken stone and screenings for District No. 3: J. E. Conklin, (a) $1.50, (b) $1.65, (c) $1.75; Quinroy Construction Co., (a) $1.74, (b) $1.95, (c) $2.15; Clinton Point Stone Co., (a) $1.50, (b) $1.62, (c) $1.67; Joseph Johnson Sons, (a) $1.55, (b) $1.65, (c) $1.70; Manhattan Trap Rock Co., (a) $1.42, (b) $1.73, (c) $1.77.

BARGE CANAL.—Albany, N. Y.—As a result of recommendations made to the Canal Board by Hon. F. C. Stevens, Supt. of Public Works, which recommendations were approved by the State Engineer and Surveyor and the Advisory Board of Consulting Engineers, Barge Canal Contract No. 18, the work on which has been under way for more than three years, is to be cancelled. The conditions which have brought about this result are that the work on this contract is of such a nature as that it could not be properly progressed beyond the present status without interfering with the navigation of the existing canal. Supt. Stevens has taken the position that under the statute it is his duty to preserve navigation on the existing canals between May 15 and Nov. 15, and as this contract, which is located at Mindenville, embraces an enlargement of the existing canal, the safety of structure would be threatened if work was to proceed further. The Canal Board has approved the Superintendent's recommendations, and has directed the State Engineer and Surveyor to prepare modified plans and modified contract, eliminating from Contract 18 the work yet remaining to be done; this work to be undertaken under a new contract, and it will probably be the last work performed before the Barge Canal is made ready for use. In the mean time there will be no further interference with navigation upon this section of the canal. The present Contract 18 is held by the O'Brien & Hoolihan Contracting Co., of Syracuse, N. Y.

CONTRACT PRICES.

SEWERS.—Erie, Kan.—Bids were received Feb. 17, for the construction of an electric lighting plant, water-works and sewers. Burns & McDonald, Scarritt Bldg., Kansas City, Mo., are Engrs. The itemized bids of the different contractors are given in the accompanying table. The bidders were as follows: (A) P. A. Johnson & Co., Lindsboro, Kan.; (B) Kansas City Plumbing & Supply Co., Iola, Kan.; (C) F. W. Yale, Coffeyvale, Kan.; (D) Fred. M. Clark, Savannah, Mo.; (E) W. W. COOK & SON, Junction City, Kan., (awarded contract); (F) W. F. Hall, Clinton, Mo.; (G) Stephen Schulte, Chanute, Kan.; (H) McGuire & Stanton, Leavonworth, Kan.; (I) H. C. Cass, Bellville, Ill.; (J) Lund & Cunyan, Blackwell, Okla.:

	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
29.280 lin. ft. 8-in. vitrified sewer pipe.....	$0.13½	$0.21	$0.15	$0.146	$0.15	$0.15	$0.16	$0.12½	$0.20	$0.19
2,950 lin. ft. 10-in. vitrified sewer pipe....	.19	.28	.21	.189	.20	.20	.19	.17	.30	.26
1,156 lin. ft. 12-in. vitrified sewer pipe....	.25	.36¼	.25	.228	.24½	.25	.25	.20	.35	.32
5,082 lin. ft. 15-in. vitrified sewer pipe....	.35	.55	.35	.32	.35	.39	.35	.33	.45	.44
290 lin. ft. 8-in. cast-iron pipe..........	1.65	.93¾	1.25	.90	.88	1.25	.35	1.00	1.20	1.00
12 lin. ft. 16-in. cast-iron pipe.........	2.75	1.60	2.25	.50	2.00	3.25	.50	2.00	3.00	2.50
5,146 lin. ft. ditch excavation, under 6 ft..	.13	.21¼	.14	.15	.12	.16	.16	.17	.20	.17
15,833 lin. ft. ditch excavation, 6 to 8 ft...	.19	.32½	.22	.23	.17	.21	.25	.20	.27	.24
11,919 lin. ft. ditch excavation, 8 to 12 ft..	.33	.43¾	.32	.37	.30	.32	.37	.35	.40	.50
6,228 lin. ft. ditch excavation, 12 to 16 ft..	.57	.62½	.65	.62	.75	.45	.60	.60	.50	.65
220 lin. ft. ditch excavation, 16 to 20 ft..	1.00	.93¾	.95	.90	1.20	.65	1.10	1.00	.70	.80
817 6-in. on 8-in. Y connections.........	.42	.37	.25	.50	.35	.70	.55	.30	.55	.72
150 6-in. on 10-in. Y connections........	.53	.60	.35	.70	.45	.90	.75	.45	.75	.90
48 6-in. on 12-in. Y connections........	.65	.75	.50	.85	.55	1.10	.90	.60	1.00	1.25
10 cu. yds. Portland concrete...........	9.00	8.00	8.50	6.00	7.00	8.50	10.00	8.00	10.00	7.50
95 manholes........................	29.00	45.00	34.00	30.00	30.00	30.00	35.00	32.00	35.00	35.00
9 lamp holes	6.00	10.00	5.00	20.00	7.00	7.50	10.00	4.50	10.00	8.00
14 flush tanks	67.00	70.00	60.00	75.00	60.00	65.00	65.00	65.00	65.00	70.00
10 M. ft. lumber	28.00	25.00	30.00	30.00	25.00	30.00	30.00	30.00	30.00	30.00
Flood gate, lump sum..................	195.00	178.75	....	290.00	165.00	475.00	75.00	300.00	325.00	300.00
Septic tank, complete, lump sum..........	3,005.60	3,525.12	....	2,049.30	2,337.80	4,731.80	3,289.00	2,805.35	2,805.35	....
14 25-ft. poles	6.50	3.06	5.25	4.00	3.75	7.50	5.50	5.00	5.00	3.50
10 30-ft. poles	8.75	4.06	6.10	5.50	4.00	9.00	6.00	6.00	6.00	5.00
80 4-pin cross arms..................	2.50	.70	3.00	.90	.75	1.25	3.00	3.00	3.00	.80
1,604 lbs. No. 8 copper line wire.........	.28	.20¾	.17½	.18	.23	.30	.17½	.17½	.17½	.20
7,130 ft. iron wire, lump sum.............	50.00	42.92	200.00	15.00	40.00	75.00	100.00	100.00	....	65.00
5 guy anchors	6.00	2.40	8.00	1.00	1.00	5.00	8.00	8.00	8.00	3.00
Totals..........................	$27,225	$36,480	$28,555	$27,788	$26,745	$29,699	$30,169	$27,228	$32,520	$33,435

PIER IMPROVEMENT.—Albany, N. Y.—Bids were received by the Board of Contract and Supply, Feb. 21, for the improvement of the State St. piers. The bidders were: (B) John Dyer, Jr., Albany; (C) Oscar D. Guilfoil, New York City; (D) T. H. Dumary & Co., Albany; (E) North Eastern Construction Co., New York City; (F) Lord Construction Co., New York City; (G) McHarg-Barton Co., New York City; (H) Elmore & Hamilton Construction Co., Albany; (Q) Morris Kantrowitz, Albany; (J) Collins Bros.' Albany; (K) Chester T. Dady, Brooklyn; (L) E. D. Tompkins, New York City; (M) John M. Holler, Albany; (N) Andrew Kinum, Schenectady. The estimate of the City Engr. (A), Walter Mellus, and the itemized bids were as follows:

	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)
Removal of southern portion of pier (lump sum)..	$3,000.00	$6,120.00	$5,000.00	$4,800.00	$3,600.00	$7,000.00	$12,500.00	$7,500.00	$3,600.00	$8,750.00	$6,000.00	$12,000.00	$7,500.00	$28,600.00
50,000 lin. ft. round piling..............	.25	.19	.35	.30	.22	.19¼	.20	.50	.49	.44	.35	.25	.50	.50
51,000 lin. ft. round piling	.20	.18	.30	.27	.21	.18⅝	.17	.48	.45	.37	.30	.24	.40	.50
206 M. ft. B. M. sheet piling	70.00	58.00	55.00	60.00	60.00	79.07	65.00	60.00	89.00	70.00	60.00	85.00	75.00	100.00
216 M. ft. B. M. sheet piling............	65.00	53.00	45.00	53.00	55.00	76.04	60.00	55.00	84.00	60.00	55.00	84.00	70.00	100.00
30.5 M. ft. B. M. waling timbers	70.00	70.00	65.00	50.00	55.00	72.73	80.00	65.00	89.00	60.00	50.00	60.00	90.00	130.00
30.5 M. ft. B. M. waling timbers..........	65.00	60.00	50.00	45.00	50.00	73.73	70.00	60.00	84.00	60.00	40.00	58.00	75.00	100.00
40,000 lbs. wrought-iron bolts, ladder irons, etc........	.06	.05½	.07	.07	.04	.24⅛	.04½	.06	.15	.08	.12	.09	.10	.07
40,000 lbs. wrought-iron bolts, ladder irons, etc.......	.05½	.05	.05	.06	.04	.21	.04	.05	.12	.06	.12	.08	.08	.06
700 cu. yds. riprap	3.00	2.00	2.50	1.30	1.00	2.51	1.00	2.25	4.00	1.75	2.50	1.75	2.00	4.00
800 cu. yds. concrete, Class A............	18.00	9.60	8.00	7.50	18.00	8.65	18.00	10.00	9.50	8.00	12.00	20.00	21.00	14.00
4,000 cu. yds. concrete, Class B............	9.00	7.25	8.00	7.10	8.00	6.25	7.50	8.00	6.25	7.50	11.00	10.00	16.50	10.00
12,000 lbs. steel reinforcing	.07	.04½	.04	.06	.03¾	.03	.04	.05	.10	.03	.04	.05	.06	.05
34 snubbing posts......................	25.00	15.00	20.00	20.00	25.00	17.95	20.00	25.00	25.00	14.50	20.00	22.00	30.00	20.00
4,000 lin. ft. 3-in. subdrains	.20	.09	.20	.25	.30	.20¾	.30	.35	.30	.42	.50	.21	.25	.40
300 lin. ft. 4-in. vitrified pipe drains...........	.25	.30	.50	.30	.55	.31⅛	.50	.45	.50	.40	.50	.42	.40	.40
40 lin. ft. 6-in. vitrified pipe drains.	.40	.60	.60	.35	.50	.50	.50	.70	.60	.60	.75	.70	1.00	.60
1,450 sq. yds. sodding	.25	.32	.80	.60	1.00	1.61	.67	1.00	.25	.55	.30	.56	1.00	.40
43,000 sq. ft. concrete pavement	.16	.11	.15	.14	.18	.16⅛	.14	.20	.18	.15	.16	.25	.30	.25
70 settees	10.00	10.00	8.50	14.00	30.00	5.65	18.00	12.00	8.00	9.54	25.00	8.00	12.00	12.00
4 flag poles	100.00	95.00	120.00	110.00	180.00	100.00	100.00	125.00	150.00	100.00	50.00	100.00	150.00	100.00
6 electric light poles and arc lamps............	110.00	110.00	125.00	100.00	130.00	125.00	150.00	175.00	75.00	130.00	100.00	125.00	200.00	165.00
Electric light conduits and cables (lump sum)...	500.00	700.00	1,000.00	600.00	800.00	1,419.00	1,000.00	2,675.00	1,000.00	950.00	2,000.00	1,400.00	550.00	2,210.00
Water piping (lump sum)................	500.00	995.00	800.00	800.00	1,230.00	1,347.00	1,800.00	1,100.00	1,000.00	975.00	1,000.00	1,100.00	1,500.00	1,513.00
2 shelters	800.00	2,140.00	2,400.00	1,800.00	2,700.00	3,000.00	2,800.00	3,100.00	2,475.00	2,350.00	3,000.00	3,000.00	3,250.00	3,627.00
Lavatory building (lump sum)............	2,000.00	2,800.00	3,800.00	3,200.00	4,200.00	9,750.00	4,500.00	4,500.00	3,700.00	4,500.00	5,000.00	5,000.00	4,500.00	5,3[illegible]0.00
Filling (lump sum)....................	4,000.00	4,200.00	4,000.00	12,000.00	2,850.00	5,940.00	12,000.00	2,500.00	8,000.00	23,000.00	15,000.00	9,000.00	3,000.00	32,000.00
Total, if piles cut off at mean low water........	$113,038	$96,166	$106,631	$106,709	$100,192	$120,268	$124,112	$127,244	$127,934	$136,072	$142,340	$145,779	$178,335	$20[illegible],486
Total if piles cut off 1 ft. above mean low water..	$110,006	$94,841	$101,564	$104,014	$109,270	$119,012	$121,846	$125,692	$124,842	$131,482	$139,855	$145,692	$172,148	$20[illegible],671
Days to complete	300	250	120	190	150	225	100	200	180	230	180	300	200	480

DREDGING.—Bids were received Feb. 23 by Major Thos. H. Rees, Corps Engrs., for dredging and rock excavation in the Chicago River, Ill. The bidders were: (B) Buffalo Dredging Co., Buffalo, New York; (C) Standard Construction Co., Chicago, Ill.; (D) The FitzSimmons & Connell Co., Chicago, Ill.; (E) Great Lakes Dredge & Dock Co., Chicago, Ill. The engineer's estimate (A) and the itemized bids were as follows:

	(A)	(B)	(C)	(D)	(E)
1,000 cu. yds. dredging, scow measurement..	$0.30	$0.70	$0.38	$0.40	$0.35
5,000 cu. yds. rock excavation, place measurement	5.00	8.00	6.45	6.50	5.35
Totals..............................	$25,300	$40,700	$32,630	$32,900	$27,100

GUIDE WALLS.—Bids were opened Feb. 24 at Wheeling, W. Va., by Capt. F. W. Alstaetter, Corps Engrs., U. S. A., for the construction of pile and crib guide walls for Locks Nos. 4 to 11 on the Kanawha River. The bidders were: (A) The G. & W. Mfg. Co., 2[illegible] Cortland St., New York City; (B) E. L. Foley, St. Albans, W. Va.; (C) The Ohio River Contracting Co., Evansville, Ind.; (D) M. F. Leonard, John V. Dale and C. R. Niday, Callipolis, Ohio; (E) Pfaff & Smith, Charleston, W. Va.; (F) Clifton Bros., Zanesville, Ohio. The itemized bids were as follows:

	(A)	(B)	(C)	(D)	(E)	(F)
212 M. ft. B. M., white oak.....	$90.00	$44.00	$50.00	$50.00	$55.00	$38.00
1,500 cu. yds. rip rap............	3.00	3.50	3.00	3.00	2.00	2.00
34,000 lbs. iron and steel..........	.06	.06	.05	.04	.08	.06
32,900 lin. ft round piling..........	.60	.50	.45	.40	.50	.39
Totals.........................	$45,348	$33,062	$31,598	$29.613	$33,822	$25,292

TUNNEL LININGS.—Pathfinder dam, North Platte, Wyo., project, delivery to be made at Casper, Wyo., U. S. Reclamation Service. The bids were opened Jan. 18 for about 150,000 lbs. of cast tunnel linings. The bid prices per lb., f. o. b. foundry, were as follows: New Jersey Foundry & Machine Co., Pittsburg, Pa., 3.21 cts.; Vulcan Iron Works Co., Denver, Colo., 3.458 cts.; Queen City Foundry Co., Denver, Colo., 3.5 cts.; Paxton & Vierling, Omaha, Neb., 3.05 cts.; Minneapolis Steel & Machine Co., Minneapolis, Minn., 3.442 cts.; St. Paul Foundry Co., St. Paul, Minn., 2.88 cts.; Elmes Engineering Works, Chicago, Ill., 3.7 cts.; Fulton Engineering Works, Los Angeles, Cal., 4.244 cts.

INDUSTRIAL NOTES.

NATHANIEL ROBERTS, designing and consulting engineer, has removed his office from 160 Fifth Ave. to 164 Fifth Ave., New York City.

A NEW SPLICE BAR MILL, which will cost approximately $300,000, is to be added to the Edgar Thompson Works of the United States Steel Corporation.

THE MINISTER OF MINES, CANADA, has given notice of a resolution providing for an expenditure not exceeding $50,000 for investigating processes to reduce zinc ores cheaper than at present.

THE RAILWAY STEEL-SPRING CO., 30 Church St., New York City, announces that Mr. A. S. Henry has been elected an additional Vice-President and that Mr. Scott R. Hayes has been appointed General Sales Agent, both effective March 3, 1910.

STEAM AND SAILING VESSELS to the number of 57 were built in the United States during the month of February, 1910, according to the report of the Bureau of Navigation. The largest steel vessels built during the month were the "Octoria," 4,329 tons, and the "Coastwise," 4,015 tons.

THE FIRE LOSS during February was $15,489,350 according to the "Journal of Commerce." This was the smallest loss for the corresponding month in the past three years. The losses for the first two months of this year were only $30,644,750, compared with $38,866,000 last year and $48,071,000 in 1908.

THE ROBINS CONVEYING BELT CO announces that its executive offices and sales, engineering and purchasing departments will move to the 26th and 27th floors and both towers of the Park Row Bldg., 13 Park Row, New York City, March 12, 1910. The sales office at 30 Church St. will be discontinued.

AN INCREASING DEMAND for second-hand contractor's equipment has made it necessary for the Barron & Cole Co., Franklin St. and West Broadway, New York City, to establish a separate department for handling this work. This branch will be in charge of Mr. George E. Ray, who was formerly connected with the Russell Contracting Co.

WALTER B. SNOW, publicity engineer, 170 Summer St., Boston, Mass., announces that his office facilities have been more than doubled by removal to larger quarters in the same building. Also that Benjamin Baker, formerly of "The Boston Transcript" and late editor of "The Navy," and Herbert M. Wilcox, experienced in various industries, especially pertaining to the chemical line, have been added to his staff.

THE SNARE & TRIEST CO., general contractors and steel fabricators, 143 Liberty St., New York City, recently purchased about 15 acres on the salt meadows between Newark and Jersey City. This location has tide water shipping facilities as well as connections with two important railroads. The company intends to erect, during the coming summer, a fabricating steel shop, the first building of which will be 120 × 300 ft. These will, later, be added to.

THE ALLIS-CHALMERS CO., Milwaukee, Wis., reports that it has the order for the complete hydraulic equipment for the Red Cedar plant of the Chippewa Valley Railway, Light & Power Co., at Eau Claire, Wis. This comprises a 3,600-HP. generator operating under 48-ft. head and placed in a hollow dam of the Ambursen Hydraulic Construction Co.'s build, with hydraulic governor and 170-HP. exciter unit., also head gates and trash racks.

THE VULCAN STEAM SHOVEL CO. make the following announcement: "On March 1 Mr. Alexander Backus disposed of his holdings in The Vulcan Steam Shovel Co., Toledo, Ohio, and retired from the Presidency after an active service of 20 years. The new owners and officers of the company are H. P. Eells, President, and G. F. Steedman, Vice-President. Carl Horix, who has been acting as General Manager for some time past, will continue in this capacity." The sale of this company to the Bucyrus Co. was announced last week.

THE FIRE PROTECTION system of San Francisco is being greatly enlarged and extended. The contracts for the first work on a new auxiliary system were let about the middle of last month. This included the contract for the first of the two pumping stations. The work will include the construction of a 10,000,000-gallon reservoir on the flank of Twin Peaks. Two 20-in. mains will lead from this reservoir through a tunnel to the city mains. These will, ordinarily, be supplied from a 500,000-gallon reservoir. The work will include the laying of 90 miles of pipe.

THE SEVERE REQUIREMENTS of steam shovels are nowhere more pronounced than in the iron ore ranges of the Michigan peninsular. Not only are the shovels worked summer and in freezing weather, but the overburden, which is stripped off the ore deposit, is a glacial drift. It consists, partially, of stiff hard clay containing many boulders. The Oliver Mining Co., a subsidiary of the United States Steel Corporation, has recently purchased from the Atlantic Equipment Co., 30 Church St., New York, six shovels for this class of work. This order was placed after a season's test of one of the new design.

THE PRODUCTION OF PETROLEUM in 1909, according to a recent bulletin of the United States Geological Survey, was 170,000,000 bbls. This was approximately the same as in the previous year, but the production in the different fields varied largely. In California and the Rocky Mountain states the increase last year was about 30%, in the Gulf field there was a falling off of at least 25% and the smallest decreases, proportionately, were shown in the Illinois and likewise the Mid-Continental fields. The production in California and the Rocky Mountain states was the largest in any one district, being 58,000,000 bbls.

THE ADVANTAGES CLAIMED for the galt patent cushion steel railroad tie are illustrated in a recent pamphlet sent out by the company. This tie is of familiar appearance to many and to them needs no detailed explanation. Two blocks of wood are held between two channel bars, the bars being about 8 ft. long. This is tamped much the same as a wooden tie. The rails are held by ordinary spikes driven into the wood. Some of these ties have been in use on the Chicago & North Western for nearly five years and, according to railroad reports, are now, after this service, very satisfactory.

C. W. LANE & CO., INC., is the style of a new firm of general contractors just organized. The offices of this company will be located in the Candler Building, Atlanta, Ga. C. W. Lane, the president, has had considerable experience in railway construction work, having been formerly connected with Lane Brothers Co. as general manager. While with Lane Bros. Co., he had charge of important contracts for the Southern Railway, Norfolk & Western, Chesapeake & Ohio and several other railroads in the South. He also had charge of the construction of the power dam, built for the Central Georgia Power Co. across the Ocmulgee River at Jackson, Ga. R. M. Thurmond is Vice-Pres. and W. D. Adams is Secy.-Treas.

RAILROAD EQUIPMENT ORDERS placed during the week include 400 all-steel, 100,000-lb. hopper cars for the Western Maryland, ordered from the Cambria Steel Co., and 500 of like capacity ordered from the Standard Steel Car Co. The Burlington is in the market for 1,000 steel underframe 100,000-lb. gondolas. The Harriman lines are in the market for approximately $5,500,000 worth of rolling stock. This includes the following cars: 1,500 box; 1,000 automobile; 1,000 flat; 1,000 stock; 800 gondola; 150 hopper, and 150 caboose.

Passenger equipment includes 205 cars of various kinds. The Lackawanna Steel Co. will supply the steel for the under frames of 2,000 cars to the built by the Merchants' Dispatch Co., in its own shops. The Southern Railway is to construct 2,000 steel under frames cars in its Lenoir, Tenn., shops.

NATURAL GAS WILL BE PIPED to St. Louis, according to the present plans of the Laclede Gas Light Co., of that city. The natural gas, which comes from the Caddo field in Louisiana, is controlled by the Bush-Everett Co. This company is expected to form a close operating alliance with the Laclede Gas Light Co. Natural gas is to be supplied to consumers at 45 to 55 cts. a thousand cu. ft. The present rate is $1 for illuminating and 90 cts. for fuel gas. To bring the gas from the Caddo fields to St. Louis, a conduit 442 miles in length, with condensing stations about 100 miles apart, will be constructed at a cost estimated from $15,000,000 to $20,000,000. The gas will be brought through a 20-in. pipe and should be ready for distribution about November, 1911. Statistics show that the Caddo field yields 300,000,000 cu. ft. of gas daily at present with only a small part of the 300,000 acres developed.

THE GROSS EARNINGS of 814 railroads, operating 228,508 miles of road in the United States in 1909 were $2,593,700,205. This is a gain of $279,070,031 compared with 1908, but is still about $60,000,000 less than in the year 1907. These figures, which were compiled by "The Chronicle," are taken from reports of the Interstate Commerce Commission. The net earnings last year were the largest on record, being $895,422,653, a gain of $146,859,166 over last year. This gain was the direct result of economies made possible by extensive expenditures for betterments made during the boom years. The operating ratio of expenses to earnings, not including taxes, was 65.48% in 1909, against 67.66% in 1908. It is interesting to note that the gain in net earnings last year was almost constant, the smallest, 10.98%, being in the southwestern group and the largest, 15.91%, in the middle western group. In the net earnings, however, the difference was marked the smallest gain, about 10%, being recorded in the Northwestern states, while a gain of about 30% was shown in the southern group of states and nearly 35% in New England.

THE PENNSYLVANIA R. R. in its report to stockholders issued last week announces that the opening of the New York tunnel extension from Harrison, N. J., through New York would be completed during the coming summer. It was eight years ago that the first announcement, regarding this work, was made. Since then each succeeding year an extensive financial program has been brought forward. This year is the first one in nearly a decade that the stockholders have not been asked to subscribe to new stock or authorize new bonds. The official figure of the cost of the New York tunnels is $102,495,530. This not only includes the tunnel cost but that of the New York improvement. The real estate item was an especially large one, but there will be a direct return to the company from this; either on rentals or actual sale. The cost of this improvement is carried on the books of the company at $57,495,530. The balance has been charged off. In other words the company has already charged off over 40% of the cost of this work. The main line improvements, aside from the tunnel work, have amounted to $177,113,027 in the same time. Only about 60% of this has been charged to capital account, the rest having been absorbed by current earnings or charged to profit and loss.

THE WOOD DRILL WORKS, Paterson, N. J., is now making a direct-acting rock drill with 5-in. cylinder which is capable of drilling a hole 50 ft. in depth finishing 4 ins. diameter.

THE BUFFALO FOUNDRY & MACHINE CO., Buffalo, N. Y., have, owing to the increased volume of business in steam hammers and vacuum dryers, decided to build a new machine shop. This will be built north of the present foundry, where ample side tracks are already provided. Approximately $200,000 will be spent for the steel and concrete construction, including traveling cranes. The entire plant will be operated by Niagara Falls power. The company, although about to take up other lines of manufacture, will also continue to make a specialty of general jobbing machine work.

THE BUCYRUS CO., South Milwaukee, Wis., has recently shipped one of their type Thirty R Steam Shovels to Alaska. This type is a new one and has only been on the market a few months and already it is finding favor with contractors who desire a light shovel, which, however, embodies all of the features of the large ones. This shovel, which is generally intended for railroad work but which will be mounted on traction wheels if so desired, weighs only 36 tons in working condition. It has the usual features of the larger shovels of the same make, such as the rigid construction of the forward end of the car, compositing boom and dipper handle, swinging jack arms and three-point suspension of the boom engine. The dipper, which is 1¼ yds. capacity, together with the boom, are so mounted that the arc of swing is 260°. This permits the loading of cars placed back of the jack arm. The usual swing of 180° is generally enough for a large shovel, but for this one being designed to work in narrow cuts, tunnels and large excavations, a larger working range is necessary. The length of the car over all, being but 24 ft. and 7 ins. with a width of 7 ft. and enables the work to be carried on in such narrow places, at the same time the spread of the jack screws being 13 ft., permits of stability.

TRADE PUBLICATONS.

CORE DRILLS.—Terry Core Drill Co., 50 Church St., New York City. 1910 Catalog. Paper; 6 × 9 ins.; pp. 60; illustrated.

The drills shown in this catalog range from a hand-power drill for 2¼-in. holes up to a power-driven core drill for holes 30 ins. in diameter. Among the illustrations is one showing cones taken from a 10-in. bore hole 2,000 ft. deep.

PULVERISERS.—American Pulveriser Co., 410 Jaccard Bldg., St. Louis, Mo. Paper; 6¼ × 3½ ins.; pp. 8; illustrated.

These machines have rings and hammers attached to the ends of alternate arms on the shaft; the ring (carried loosely on its attachment) does the heavy striking, while the swinging hammer head agitates and distributes the material. For rock, cement clinker and other hard, dry refactory material, the machine is fitted with rings only.

Sizes and weights of the machines are given.

ASPHALTIC ROAD SURFACING.—The American Asphaltum & Rubber Co., Chicago, Ill. Paper; 6 × 9 ins.; pp. 22; illustrated.

In regard to the note of the above catalog published in our issue of Feb. 3, 1910 (p. 48, adv. pages), the publishers write:

> The note may be misleading to some of your readers as it would imply that our road asphalt could be applied to the wearing surface of an old macadam road; this cannot be done successfully without the addition of some crushed stone as described in the first part of our specifications.

A STEAM PILE DRIVER.—Union Iron Works, Hoboken, N. J. Catalog No. 2; paper; 6 × 9 ins.; 32 pp.; illustrated.

This catalog shows the design, construction and use of the "Arnott" type of steam pile driver. In this design a heavy hammer is attached to a piston rod, and the steam is used not only to raise this weight previous to the drop, but for increasing the velocity of fall and the force of the blow on the pile. The final pages of the catalog show testimonials of those who have used the driver. A table of size, weights, etc., is included.

CONCRETE MIXERS.—R. Z. Snell Mfg. Co., South Bend, Ind. Paper; 9 × 6 ins.; pp. 19; illustrated.

The Snell mixer is of the drum type, but with the special feature that one end is closed while the other end is open and unobstructed. Trunnion bearings at the base permit of the drum being placed at various angles (by means of gearing) for charging, mixing and discharging. The drum revolves on a ball-bearing spindle in the center of the closed bottom. The machines are built with or without the driving engine mounted on the same bed, and for side or end discharge.

ELECTRIC LIGHTING.—The General Electric Co., Schenectady, N. Y. Miscellaneous pamphlets; paper; illustrated.

In a little leaflet (No. 3907) 3½ × 6 ins., the great advantages of using what is termed a "Mazda" lamp are set forth. Its name is one given to what was previously known as simply the tungsten filiment lamp. Some minor improvements have been made in the manufacture.

A larger pamphlet (No. 3894) 5½ × 7¾ ins. covers some of the typical installations of tungsten and tantalum lamps of greatest interest to managers of hotels and large buildings. In addition, the costs of lighting under different conditions are very generally set forth.

TILE DITCHING MACHINE.—The St. Paul Ditcher & Carrier Co., St. Paul, Minn. Paper; 9 × 6 ins.; pp. 16; illustrated.

The Hovland machine for drainage ditch work has an excavator of the continuous chain type, so arranged as to allow the chain to buckle when one of the cutters strikes a large boulder or other obstruction, so that the cutters will pass over the obstruction. Behind the chain (where it passes over the lower sheave) is a box or chamber which slides inside the trench, and in which is a curved chute by which the tiles are automatically deposited in place. For tiles of over 14 ins. diameter, however, the placing is assisted by a man working under the protection of the chamber. The excavating apparatus deposits the material as a lateral belt conveyor, and is operated by a gasoline traction engine. Both the engine and the ditcher are of the "caterpillar" traction type, adopted for working in soft and wet ground. Several testimonials are given.

DUSTLESS AND AUTO-PROOF ROAD MATERIAL.—Amies Road Co., 576 Bourse Bldg., Philadelphia. Paper; 7¼ × 7¾ ins.; pp. 22; illustrated.

The company named sets forth briefly the character and advantages of a plan which it has developed for road construction. The plan is to mix asphaltic cement with broken stone at central points, and deliver it ready for use without further treatment. It appears that the company takes its name from a Mr. Amies, who built a road in Wilmington, Del., in 1904, which, the pamphlet states, has not required any expense for repairs since that date, "and which has not materially deteriorated in any way." The company was chartered on Jan. 5, 1909, and it states that during the year it sold over 95,000 tons of stone, or material for 635,000 sq. yds. of road. Its permanent plants are located at Bound Brook, Lambertville, Millington and Snake Hill, N. J., and at Rock Hill, Glen Mills and El Dorado, Pa., on lines of the Pennsylvania, Erie, D., L. & W., Lehigh Valley, Philadelphia & Reading, Central Railroad of New Jersey, and the Delaware & Raritan Canal.

LIST OF CONTRACTS PENDING.

Light, Heat and Power Plants.

		Noted in issue of
3-15	Franchise, Sierra Madre, Cal.	2-17
3-15	Electric fixtures, Green Bay, Wis.	2-17
3-16	Equipment, New York	3-10
3-16	Furnishing gas, etc., New York.	3-10
3-16	Lighting fixt., Indianapolis, Ind.	3-10
3-21	Materials, New York	3-10
3-23	Lighting equipment, Cleveland, O.	3-10
3-23	Franchise, Williamsburg, Va.	3-10
4-15	Elec. plants, Camrose, Alta.	3-10
3-28	Franchise, Los Angeles, Cal.	3- 3
4- 6	Franchise, Hayward, Cal	3- 3

Bridges.

3-11	Bridge work, Cincinnati, Ohio	2-17
3-11	Bridge, Cincinnati, Ohio	2-24
3-11	Bridge, Hutchinson, Kan.	2-24
3-11	Spans, Albuquerque, N. Mex.	3-10
3-12	Bridges, Edmonton, Alta.	2-17
3-14	Bridge, Savannah, Ga.	2- 3
3-14	Bridge, Clarksfield, Ohio	3- 3
3-14*	Swing span, Snohomish, Wash.	3- 3
3-15	Bridges, Columbus, Neb	3- 3
3-15	Bridge work, St. Louis, Mo.	3- 3
3-15	Bridge, Niagara Falls, N. Y.	3-10
3-16	Bridge, Ellicott City, Md.	3-10
3-16*	Bridge, Phoenix, Ariz	3- 3
3-16*	Substructure, etc., St. Joseph, Mich.	2-17
3-19	Bridge, Georgetown, Colo.	3-10
3-19	Bridge work, Cleveland, Ohio	3-10
3-22	Bridges, Grand Fork, N. Dak.	3-10
3-22*	Bridge, Shreveport, La	3- 3
3-24	Bridge work, Reading, Pa.	3-10
3-28	Bridges, Hartford City, Ind.	3-10
3-29	Bridges, Muskogee, Okla.	3-10
3-29*	Bridge, Kempton, Pa.	3-10
3-31*	Bridges, Minneapolis, Minn.	3-10
4- 4	Bridge, Streator, Ill.	3-10
4- 4	Bridge, Laporte, Ind	3- 3
4- 5	Bridge, San Jose, Cal.	3- 3
4- 5	Bridge, Castlerock, Wash.	2-24
6- 1	Substructure, Whiterocks, Utah	3-10

Buildings.

3-11	Quarters, Ft. Benj. Harrison, Ind.	3- 3
3-11	Post-office, Jackson, Tenn.	2-10
3-12	Wire rope mill, Boston, Mass. (Mfg. Pl.)	2-10
3-12	Storehouse, Mt. Dade, Fla.	2-24
3-14*	Post-office, Frankfort, Ky.	2- 3
3-14	Mill, Winnipeg, Man. (Mfg. Pl)	3-10
3-15	Pump-house, Winnipeg, Man. (Mfg. Pl.)	3-10
3-15	Building, Buffalo, N. Y.	3-10
3-15	Building, Yorkton, Sask.	3-10
3-15*	Post-office, Denver, Colo.	1-27
3-15	Buildings, Ft. Bayard, N. Mex.	2-17
3-15	Building, Indianapolis, Ind.	2-27
3-15	Quarters, etc., Ft. McKinley, Me.	2-24
3-16	Post-office, Danville, Va.	2- 3
3-17*	Post-office, Richmond, Va.	2-10
3-18	Post-office, Rome, Ga.	2- 3
3-18	Ordnance shop, Ft. Wadsworth, N. Y. (Mfg. Pl.)	3- 3
3-19	Building, New York	3- 3
3-21	School, New York	3-10
3-21	Quarters, etc., Ft. D. A. Russell, Wyo	3- 3
3-21	Post-office, Lincoln, Ill.	2-17
3-21	School, Fresno, Cal.	3-10
3-22	School, Newark, N. J.	3-10
3-22*	Post-office, Fremont, Neb.	2- 3
3-23	Quarters, Ft. Totten, N. Y.	3- 3
3-23*	Post-office, Connersville, Ind.	2-17
3-24	Post-office, Sacramento, Cal.	2- 3
3-25	Post-office, Lexington, Ky.	2-17
3-25	Light-house, etc., San Francisco, Cal.	3-10
3-25	Storehouse, Ft. Barrancas, Fla.	3-10
3-26	Church, Kelowna, B. C.	3-10
3-26	Post-office, Rochester, N. Y.	3-10
3-28*	Post-office, Quincy, Ill.	2-17
3-28	School, Cincinnati, Ohio	3-10
3-29	Post-office, Estherville, Ia.	2-17
3-30*	Court-house, Butte, Mont.	2- 3
3-30	Post-office, Peru, Ind.	3- 3
3-31	Post-office, Brainerd, Minn.	3- 3
3-31	Quarter, Ft. Sam Houston, Tex.	3-10
4- 1	Buildings, Ft. Mason, Cal	3- 4
4- 1	Post-office, Hattiesburg, Miss.	3- 3
4- 5	Post-office, Independence, Mo.	3- 3
4- 6	Ice plant, North Chicago, Ill. (Mfg. Pl.)	3-10
4-11	Post-office, Ashtabula, Ohio	3-10
4-14	Post-office, Columbus, Neb.	3-10

Water-Works.

3-14	Pumping engine, Phoenix, Ariz.	2-10
3-14	Pipe, Saskatoon, Sask.	3- 3
3-14	Tank and tower, Fort Reno, Okla.	3- 3
3-14	Water bonds, Waterbury, Conn.	3- 3
3-14	W.-wks. bonds, Cincinnati, Ohio.	3-10
3-14	Tower and tank, Washington, D. C.	3-10
3-22*	Standpipe, etc., Henryetta, Okla.	3-10
3-15	Water meters, Fort Wayne, Ind.	3-10
3-15*	Boilers, Atlantic City, N. J.	3- 3
3-15	Water-works extension, Burlington, Wis.	2-17
3-19*	Dams, etc., Kiowa, Colo.	3- 3
3-21	Water-works extension, Columbus, Kan.	3- 3
3-21*	Steam engine, Galesburg, Ill.	3- 3
3-21	Standpipe, Saskatoon, Sask.	3- 3
3-21	Water tower, Faulkton, S. Dak.	3- 3
3-21	Water pipe, Santa Ana, Cal.	3-10
3-21	Pipe connections, Hammond, Ind.	3-10
3-25*	Main, Lebanon, Pa.	3- 3
4- 1*	Water-works, Miles, Tex.	3-10
4- 4	Water pipe, Winnipeg, Man.	3-10
4- 6*	Pumping plant, Fort Hancock, N. J.	3-10
4-11*	W.-Wks. bonds, Ramona, Okla.	3-10
4-14	Water-works supplies, Aberdeen, S. Dak.	3-10

Sewers.

		Noted in issue of
3-11	Drains, Milwaukee, Wis.	3-10
3-12	Sewer, Craftton, Pa.	3-10
3-14	Sewer system, Lodi, Cal.	3-10
3-14	Sewers, Oklahoma City, Okla.	3-10
3-15	Sewers, Burlington, Wis.	2-17
3-15	Sewers, Clinton, Okla	3- 3
3-16	Sewers, Madison, Fla.	2-24
3-16	Sewers, Cranford, N. J.	3-10
3-17*	Sewers, Monticello, N. Y.	3- 3
3-23	Sewers, Brooklyn, N. Y.	3-10
3-23	Sewer franchise, Williamsburg, Va.	3- 3
4- 1	Sewer system, Cleveland, Tenn.	2-17
4- 4	Culvert, Ashley, N. Dak.	2-10

Streets and Roads.

At once*	Paving, etc., East Orange, N. J.	3-10
3-11	Gravel road, Brazil, Ind.	2-24
3-11	Gravel road, Brazil, Ind.	3- 3
3-11	Road machinery, Minneapolis, Minn.	3- 3
3-12	Gravel road, La Fayette, Ind.	3- 3
3-12	Stone roads, Laporte, Ind.	3- 3
3-12	Paving, Orrville, Ohio	2-24
3-12	Macadam, Laporte, Ind.	2-24
3-14	Paving, Caney, Kan.	2-17
3-14	Paving, Oil City, Pa.	3- 3
3-14	Grading, Wenasha, Wis.	3- 3
3-14	Asphalt, New York	3-10
3-15	Paving, Ames, Iowa	3-10
3-15	Paving, Elizabeth, N. J.	3-10
3-15	Paving, Sylvania, Ohio	3- 3
3-15	Gravel road, Danville, Ind.	3- 3
3-15	Roads, Gordon, Ala.	1-13
3-15	Paving, Burlington, Wis.	2-24
3-16	Roads, Olympia, Wash.	3-10
3-17	Sidewalks, Dustin, Okla.	3-10
3-17	Loam, etc., New York	3-10
3-17*	Paving, Corning, N. Y.	2-10
3-18	Paving, Iowa City, Ia.	3-10
3-18*	Paving, Matteawan, N. Y.	3-10
3-21	Paving, Mt. Clemens, Mich.	3- 3
3-22	Walks, Canton, Ohio	2-24
3-23	Roads, Olympia, Wash.	3-10
3-24	Highways, Baltimore, Md.	3-10
3-24	Highway, Erie, Pa.	3-10
3-25	Road, Cincinnati, Ohio	3- 3
3-30	Paving, Raleigh, N. C.	2-10
3-30	Road, Cleveland, Ohio	3-10
3-30	Macadam, Columbus, Ohio	3-10
4- 1	Roads, Cincinnati, Ohio	3-10
4- 4*	Roads, walks, Ft. Du Pont, Del.	3-10
4-12	Macadam, St. Paul, Minn.	3- 3

Miscellaneous.

3-10	Sod, New York	3-10
3-11	Road oil, New Haven, Conn.	3-10
3-12	Ditches, Garner, Iowa	3-10
3-12	Wagon scales, New York	3- 3
3-12	Repairing launch, Jackson Barracks, La.	2-17
3-12*	Removing wrecks, Boston, Mass.	2-17
3-14*	Cement, etc., Wash., D. C.	2-17
3-14	Steel, bolts, etc., Wheeling, W.Va.	3- 3
3-14	Iron fence, Boston, Mass.	3,10
3-15	C.-I. monuments, Ottawa, Ont.	3-10
3-15	Bulkhead, Norfolk, Va.	3-10
3-15	See Intercolonial Ry.	3- 3
3-16	Track elevation, Fort Wayne, Ind.	3- 3
3-16	Moving stones, Portland, Me.	2-17
3-16	Tile, Jefferson, Iowa	3-10
3-16	Drainage, Wapells, Iowa	3-10
3-17	Sod, New York	3-10
3-17	Timber, supplies, Ottawa, Ont.	3-10
3-17	Ditch, New Smyrna, Fla.	3-10
3-17	Ditches, Redwood Falls, Minn.	3-10
3-18	Dredging, Wilmington, Del.	2-24
3-18	Levee, Memphis, Tenn.	3- 3
3-18	Dredging, Ashland, Ohio	3-10
3-21*	See Abilene Central R. R.	3- 3
3-21	Dredging, Brunswick, Ga.	2-24
3-23	Revetment, Ft. Screven, Ga.	3- 3
3-23*	Ash collection, etc (Garbage), Washington, D. C.	3-10
3-23*	Breakwater, Chicago, Ill.	3-10
3-24*	Cement, Duluth, Minn.	3- 3
3-24	Derrick boats, Wheeling, W. Va.	3- 3
3-26	Ditches, Bluffton, Ind.	3- 3
3-29*	Dredging, New York	3- 3
3-29	Barge Canal, Albany, N. Y.	2-24
3-30	Snagboat, Wheeling, W. Va.	3- 3
3-30*	Crematory (Garbage), Fort Sheridan, Ill.	3-10
4- 1*	Dredging, New York	3- 3
4- 1	Torpedo boats, Wash., D. C.	2- 3
4- 4	Culverts, Ashley, N. Dak.	2-10
4-7	Ash-hoist, Baltimore, Md.	3-10
4-15	See Algoma Central & Hudson Bay Ry.	3- 3
4-30	Ditch, Olivia, Minn.	12-23

Examinations.

3-16	Plant Pathologist, Wash., D. C.	2-17
3-16	Laboratory Aid, Wash., D. C.	2-17
3-16	Cement Tester, Philippines	2-17
3-16	Assistant, Wash., D. C.	2-17
3-29	Mechanical and Optical Dftsman, Philadelphia, Pa	3- 3
3-29	Clerk-Draftsman, Cheyenne, Wyo.	3- 3
3-29	Mechanical Dftsman, Wash., D. C.	3- 3
3-30	Scientific Asst., Wash., D. C.	2-10
4- 6	Scientist in Soil Survey, Wash., D. C.	3- 3

Plans and Specifications on File.

The following plans (P.) and Specifications (S.) are on file (for reference only unless otherwise noted) at office of The Engineering News Publishing Co., 220 Broadway, New York.

3-12	Wire rope mill, Boston, Mass. (S.)	2-10
3-15*	Boilers, Atlantic City, N. J. (S.)	3- 3
3-17*	Sewers, Monticello, N. Y (P. & S.)	3- 3

For other Proposal Advertisements see pages 51, 52, 53, 54, 56, of Advertisements and Construction News page 98.

WATER WORKS BONDS.

Ramona, Okla.

Bids will be received at the Clerk's Office in the Town of Ramona, Oklahoma, until Monday, April 11th, 1910, for purchase of eighteen thousand dollars of Ramona water-works bonds, running for a period of twenty years with interest at 6% per annum, payable semi-annually in the town of Ramona, Oklahoma,

Bonds dated January 1st, 1910.

The right is reserved to reject any and all bids.

Address inquiries and bids to

A. A. MIKEL, Clerk,
Ramona, Oklahoma.

OFFICE OF THE COMMISSIONERS, D. C., Washington, March 2, 1910.—Sealed proposals will be received at this office until 2 o'clock p. m. on Wednesday, the twenty-third day of March, 1910, for the collection and disposal of ashes, garbage, dead animals, night soil, and miscellaneous refuse in the District of Columbia, and for the removal of ashes and refuse from buildings under the control of the Commissioners, for periods of one, three, and five years. Specifications, blank forms of proposal, and all necessary information may be obtained at the Office of the Superintendent of Street Cleaning, Room 329, District Building. CUNO H. RUDOLPH, JOHN A. JOHNSTON, WILLIAM V. JUDSON, Commissioners, D. C.

OFFICE CONSTRUCTING QUARTERMASTER, Fort Sheridan, Illinois, March 1, 1910.—Sealed proposals, in triplicate, will be received at this office, until 12 o'clock noon, March 30, 1910, and then opened, for the construction of a crematory building and garbage crematory, at Fort Sheridan, Illinois. Plans, specifications, blank proposals, etc., will be furnished prospective bidders, by this office, upon deposit of $10.00 for each set, which will be refunded upon return of same. Envelopes containing proposals must be endorsed "Proposals for Construction of Crematory," and addressed to "Constructing Quartermaster, Fort Sheridan, Illinois." M. E. SAVILLE, Captain 27th Infantry, Constructing Quartermaster.

TREASURY DEPARTMENT. Office of the Supervising Architect, Washington, D. C., March 3d, 1910.—Sealed proposals will be received at this office until 3 o'clock P. M. on the 7th day of April, 1910, and then opened, for installation of an ash hoist, in the extension to the U. S. Post Office and Court House, Baltimore, Maryland, in accordance with the specification and drawing enumerated therein, copies of which may be had at this office or at the office of the Superintendent of Construction, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect.

Situations Wanted

Mechanical and Electrical Engineers.

MECHANICAL ENGINEER, technical graduate, desires change; valuable factory and drawing office experience, design, estimating; automobile work preferred. Address "G. B. 10," Engineering News, New York. 10-1t

Civil Engineers.

CIVIL ENGINEER, R. P. I. graduate, three years' experience surveying, drafting, computing, wishes to enter established firm with view to working up. Address "H. B. 10," Engineering News, New York. 10-1t

CIVIL ENGINEER and superintendent, who has had twelve years' experience in all classes of work and has been employed by the present firm for four years, desires to change. Address "X. B. 10," Engineering News, New York. 10-1t

ENGINEER, U. of P., general experience, wishes permanent position; best references. Address "D. B. 10," Engineering News, New York. 10-1t

Draftsmen.

WANTED—By lady, position as draftsman in engineer's office; salary moderate; railway construction preferred. Address "P. A. 6," Engineering News, New York. 10-1t

MECHANICAL DRAFTSMAN of four years' experience desires position; moderate salary; good references. Address "S. B. 10," Engineering News, New York. 10-1t

Bridge and Structural Engineers.

RAILROAD Bridge Engineer, age [illegible]2, married, technical graduate, mathematician, rapid scientific designer; salary $175; references. Address "H. A. 5," Engineering News, New York. 10-1t

Superintendents, Misc., Etc.

WORKS CLERK, Cashier, Paymaster, Correspondent; exceptional ability, absolutely trustworthy and reliable, best references, bond any amount, would consider engagement as above, or office manager; anywhere. Address "A. B. [illegible]," Engineering News, New York. 10-1t

WATER-WORKS ENGINEER, age [illegible], married; at present in charge of drafting and designing department, office of chief engineer, New York Aqueduct Commission; desires position with engineer or contractor; office or construction work. Address "P. 9," Engineering News, New York. 10-2t

SUPERINTENDENT, or Assistant, technical education, 31, experienced on masonry, concrete, land, soft tunnels, deep foundations, bridges; economical manager; energetic. Address "W. B. 10," Engineering News, New York. 10-1t

INSPECTOR—Reinforced concrete, masonry, bridges, piers, piling, water-works; any kind of construction; instrument man. Address "E. B. 10," Engineering News, New York. 10-4t

TIMEKEEPER—Foreman; concrete, hydraulic dredging, etc.; thoroughly reliable; highest references; will go anywhere. Address "B. B. 10," Engineering News, New York. 10-1t

CONTRACTOR'S SUPERINTENDENT or engineer, with fifteen years' reference in foundations, masonry, reinforced-concrete, sewers, water-works and railroad construction; age 34; Asso. M. Am. Soc. C. E. Address "C. B. 10," Engineering News, New York. 10-4t

FOREMAN or general foreman, twenty years' practical experience on asphalt and other paving, wishes position. Address "I. B. 10," Engineering News, New York. 10-1t

Situations Open

WANTED—At once, draftsman with experience in steam piping layouts, structural work and some electrical knowledge. State fully qualifications, age, previous experience, and salary expected. Address "K. B. 10," Engineering News, New York. 10-1t

A SURVEYOR and draftsman for town and country work in Connecticut; state age, experience, references and salary expected. Address "M. B. 10," Engineering News, New York. 10-2t

DRAFTSMEN—Experienced bridge or structural steel draftsmen and designers wanted for important work in New York City immediately. Reply, stating full experience, references and salary expected, to GENERAL POST OFFICE BOX 100, New York City. 10-1t

STRUCTURAL DRAFTSMEN on steel work; also Checker. Draftsmen on ornamental work, especially experienced on stair and elevator enclosure. Apply 624 East 19th St., New York. 10-1t

Miscellaneous Wants

WANTED—UNBOUND VOLUMES OF ENGINEERING NEWS—Numbers 53, 54, 55. Will pay 20 cts. for one copy each of Engineering News of Aug. 26, Sept. 16, 1909. BOX 707, Norman, Okla. 10-1t

TABLES OF SAFE LOADS
For Wooden Beams and Columns
By KIDWELL and MOORE

Tables showing Safe Loads, Deflections, etc., based on allowable working unit stresses recommended by "Committee on Strength of Bridge and Trestle Timbers," of the Association of Railway Superintendents of Bridges and Buildings.

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